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**Test Report No.:** LD110420C35**Client****Name :** Shin Chuan Computer Co., Ltd.**Address :** 6F.-2, No.68, Liancheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)**Test Item :** Portable Data Terminal**Identification :** SC900, M1000**Testing laboratory****Name :** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**Address :** No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan ( R.O.C )**Test specification****Standard :** EN 60950-1:2006 + A11:2009 + A1:2010**Test Result :** The test item passed.**Prepared By :**David Li

Signature

David Lin

Engineer

November 16, 2011

Date

**Approved By:**[Signature]

Signature

Danny Lin

Assistant Manager

November 16, 2011

Date

**Other Aspects:**

The completed test report includes the following documents:

- EN 60950-1 report (78 pages)



The test report shall not be reproduced except in full, without written approval of the laboratory.  
This test report does not entitle to carry any safety mark on this or similar products.

**TEST REPORT****EN 60950-1****Information technology equipment – Safety –  
Part 1: General requirements****Report**

Reference No. LD110420C35  
Compiled by (+ signature) See cover sheet  
Approved by (+ signature) See cover sheet  
Date of issue November 16, 2011

**Testing laboratory**

Name Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Address No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan ( R.O.C )  
Testing location Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Address No. 19, Hwa Ya 2nd Rd, Kueishan Taoyuan, Taiwan, R.O.C.

**Client**

Name Shin Chuan Computer Co., Ltd.  
Address 6F.-2, No.68, Liancheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)

**Test specification**

Standard EN 60950-1:2006 + A11:2009 + A1:2010  
Test procedure CE Marking serial in LVD  
Non-standard test method N/A.

**Test Report Form/blank test report**

Test Report Form No. IECEN60950\_1C  
TRF originator. SGS Fimko Ltd  
Master TRF Dated 2007-06

**Test item**

Description Portable Data Terminal  
Trademark   
Model and/or type reference SC900, M1000  
Manufacturer Shin Chuan Computer Co., Ltd.  
Rating(s) Optional; 5Vdc, 1A for adapter or 1.5A for Docking

Copy of marking plate and summary of test results (information/comments):

**For model SC900:**

<b>Model No.:SC900</b>	<b>Shin Chuan Computer Co., Ltd.</b> 6F-2, 268, Lian Cheng Rd., ZhongHe City, Taipei County 23553, Taiwan (R. O. C.)
<b>Portable Data Terminal</b>	5VDC 1A for USB 5VDC, 1.5A for Docking
FCC ID :TQ2-SC900PDT-BWG	CMIIT ID: XXXXXXXXXX
MADE IN TAIWAN	
<b>FCC</b>	<b>CE</b>
<b>RoHS</b>	<b>0560</b>
<b>UL</b>	<b>LISTED</b>
<b>34GH</b>	<b>E302749</b>

**For model M1000:**

<b>Model No.:M1000</b>	<b>Shin Chuan Computer Co., Ltd.</b> 6F-2, 268, Lian Cheng Rd., ZhongHe City, Taipei County 23553, Taiwan (R. O. C.)
<b>Portable Data Terminal</b>	5VDC 1.5A
FCC ID :TQ2-SC900PDT-BWG	CMIIT ID: XXXXXXXXXX
MADE IN TAIWAN	
<b>FCC</b>	<b>CE</b>
<b>RoHS</b>	<b>0560</b>
<b>UL</b>	<b>LISTED</b>
<b>34GH</b>	<b>E302749</b>

**Laser marking:**

**For Laser scan engine (Optoelectronics Co., Ltd., model: MDL-1000)**

<b>LASER RADIATION</b>	<b>IEC60825-1+A2:2001</b>
<b>CAUTION</b>	<b>DO NOT STARE INTO BEAM</b>
<b>CLASS 2 LASER PRODUCT</b>	<b>2 类激光产品</b>
<b>Maximum output 1.0mW Wavelength 650nm</b>	

**For Battery Pack:**

<b>P/N: BP08-000670</b>	<b>ETI CA Battery Inc.</b>
<b>Serial No. XXXXXXXXX</b>	
<b>Li-ion Battery Pack 3.7V 1840mAh/6.8Wh</b>	
<b>Caution:</b>	
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS. TO PREVENT INJURY OR BURNS: DO NOT DISPOSE OF IN FIRE.DO NOT SHORT- CIRCUIT.DO NOT CRUSH OR OPEN.	<b>CE</b>
<b>Made in Taiwan</b>	<b>MH29921</b>

**This is a reference label. Final label shall be including the content of it.**

**Test item particulars**

Equipment mobility	<input type="checkbox"/> movable <input checked="" type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains	<input type="checkbox"/> pluggable equipment <input type="checkbox"/> type A <input type="checkbox"/> type B <input type="checkbox"/> permanent connection <input type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input checked="" type="checkbox"/> not directly connected to the mains
Operating condition	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location	<input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input checked="" type="checkbox"/> other: DC Supply.
Mains supply tolerance (%) or absolute mains supply values	N/A
Tested for IT power systems	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	<input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating (A)	See page 2 "Ratings"
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	IPX0
Altitude during operation (m)	< 2000m
Altitude of test laboratory (m)	250m
Mass of equipment (kg)	0.24 kg

**Possible test case verdicts:**

- test case does not apply to the test object	N/A
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement	F (Fail)

**Testing**

Date of receipt of test item	July 07, 2011
Date(s) of performance of tests	July 07, 2011 to August 01, 2011

**General remarks:**

The test results presented in this report relate only to the object tested.  
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.  
"(See Enclosure #)" refers to additional information appended to the report.  
"(See appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.


**General product information:**

- 1) The equipment is a hand held of Portable Data Terminal.
- 2) Dimension of EUT: 144 by 62 by 35.8 mm.
- 3) The Portable Data Terminal has Bar Code scanning function, provided with Class 2 laser scan engine and battery pack which charged by power adapter or docking.
- 4) The maximum ambient temperature is specified as 50°C
- 5) The maximum ambient temperature at adapter report is specified as 40°C, however after additional test the maximum ambient temperature can reach to 50 °C.
- 6) The model BP08-000670 battery pack top and bottom enclosure are secured together by ultrasonic welded.
- 7) The power from external docking is not evaluated in this report. However, for acceptance of the accessory docking output shall comply with LPS requirements according to IEC/EN60950-1 clause 2.5, docking with output rating (5Vdc, 1.5A), maximum temperature 50°C.
- 8) All testing were conducted on Model SC900 to represent other series.
- 9) The model M1000 sound pressure test (Sub-clause 1.3.z1) complied with the requirements of EN 50332-2 (tested in this report).

For EN 50332-2 standard., the tests data as below:

Channel	Measured voltage (mV)	Limits
Channel L	62	$\leq 150\text{mV}$
Channel R	62	$\leq 150\text{mV}$

**Model Difference**

Trademark	Product name	Model mane	Power with	Input current	Communication Ports	Remark
	Portable Data Terminal	SC900	Adapter or Docking	With adapter 1 A With docking 1.5 A	USB port	For marketing purpose
		M1000	Docking	1.5A	Headset port	

**Test condition:**

Temperature: 25°C

Relative humidity: 60%

Air pressure: 950 mbar

The test sample was a pre-production sample without serial number.




EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	GENERAL		P
1.5	Components		P
1.5.1	General	Components, which were found to affect safety aspects, are conformed to the relevant IEC component standards and/or comply with the requirements of this standard.	P
	Comply with IEC 60950-1 or relevant component standard	(see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	Components which are certified to IEC and/or national standards are used correctly within their ratings.  Components not covered by IEC standards are tested under the conditions presented in the equipment.	P
1.5.3	Thermal controls	No thermal controls used.	N/A
1.5.4	Transformers	Class III equipment, supplied by the SELV provided by the certified power adapter.	N/A
1.5.5	Interconnecting cables	Interconnecting cable for Interconnection is carrying only SELV voltages with power consumption below 240 VA.	P
1.5.6	Capacitors bridging insulation		N/A
1.5.7	Resistors bridging insulation		N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		N/A
1.5.9.1	General	No such varistor used.	N/A
1.5.9.2	Protection of VDRs	No such varistor used.	N/A
1.5.9.3	Bridging of functional insulation by a VDR	No such varistor used.	N/A
1.5.9.4	Bridging of basic insulation by a VDR	No such varistor used.	N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR	No such varistor used.	N/A





EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6	Power interface		P
1.6.1	AC power distribution systems	Class III equipment, supplied by the SELV provided by the certified power adapter.	N/A
1.6.2	Input current	(See appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	The rated voltage of Portable Data Terminal not exceed 250V.	P
1.6.4	Neutral conductor	Class III equipment, supplied by the SELV provided by the certified power adapter.	N/A

1.7	Marking and instructions		P
1.7.1	Power rating	See below.	P
	Rated voltage(s) or voltage range(s) (V) .....	DC 5V	P
	Symbol for nature of supply, for d.c. only .....	Symbol 60417-2-IEC-5031 used.	P
	Rated frequency or rated frequency range (Hz) ....	The EUT is supplied by DC	N/A
	Rated current (mA or A) .....	1A for adapter, 1.5A for docking	P
	Manufacturer's name or trade-mark or identification mark .....	Manufacturer's name: Shin Chuan Computer Co., Ltd. or  Trade-mark: SHIN CHUAN COMPUTER CO., LTD.	P
	Model identification or type reference .....	SC900, M1000	P
	Symbol for Class II equipment only .....	Class III equipment, supplied by the SELV provided by the certified power adapter.	N/A
	Other markings and symbols .....	Additional symbols or markings do not give risk to misunderstanding.	P
1.7.2	Safety instructions and marking	Safety related information in English has been evaluated. The manufacturer commits to provide them in the language of the countries where the product will be distributed.	P
1.7.2.1	General	See below.	N/A
1.7.2.2	Disconnect devices	Class III equipment, supplied by the SELV provided by the certified power adapter.	N/A
1.7.2.3	Overcurrent protective device	No such device.	N/A



EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.4	IT power distribution systems	Class III equipment, supplied by the SELV provided by the certified power adapter.	N/A
1.7.2.5	Operator access with a tool	No tool is necessary when operating this product.	N/A
1.7.2.6	Ozone	This EUT is not intended to produce the ozone.	N/A
1.7.3	Short duty cycles	This EUT is a continuous operation equipment.	N/A
1.7.4	Supply voltage adjustment .....	No such device	N/A
	Methods and means of adjustment; reference to installation instructions .....	No such device	N/A
1.7.5	Power outlets on the equipment .....	No power outlets.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....	Class III equipment, supplied by the SELV provided by the certified power adapter.	N/A
1.7.7	Wiring terminals	See below.	N/A
1.7.7.1	Protective earthing and bonding terminals .....	Class III equipment, no protective earthing.	N/A
1.7.7.2	Terminals for a.c. mains supply conductors	Class III equipment. Not connected to the a.c. mains directly.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	The EUT is not intended to be connected to the d.c. mains.	N/A
1.7.8	Controls and indicators	No safety relevant switch or control.	N/A
1.7.8.1	Identification, location and marking .....	See below.	N/A
1.7.8.2	Colours .....	No safety relevant control or indicator.	N/A
1.7.8.3	Symbols according to IEC 60417 .....	No safety relevant control or indicator.	N/A
1.7.8.4	Markings using figures .....	No safety relevant switch.	N/A
1.7.9	Isolation of multiple power sources .....	Not used.	N/A
1.7.10	Thermostats and other regulating devices .....	No thermostat or other regulating devices.	N/A
1.7.11	Durability	After this test there was no damage to the label. The marking on the label did not fade. There was no curling or lifting on the label edge.	P
1.7.12	Removable parts	No removable parts.	N/A
1.7.13	Replaceable batteries .....	Provided in the user manual.	P





EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Language(s) .....	Only verified the English version.	—
1.7.14	Equipment for restricted access locations.....	This product is not intended to be used in the restricted access locations.	N/A

2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas	See below.	P
2.1.1.1	Access to energized parts	Class III equipment, there are no hazardous voltages generated inside the EUT.	P
	Test by inspection .....	The inspection was conducted as below.	P
	Test with test finger (Figure 2A) .....	There is no hazardous voltage generated inside the EUT.	N/A
	Test with test pin (Figure 2B) .....	There is no hazardous voltage generated inside the EUT.	N/A
	Test with test probe (Figure 2C) .....	No TNV circuit in the EUT	N/A
2.1.1.2	Battery compartments	No TNV circuit in the equipment.	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area.	N/A
	Working voltage ( $V_{peak}$ or $V_{rms}$ ); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	N/A
2.1.1.5	Energy hazards .....	Class III equipment, supplied by the SELV provided by certified power adapter. And there is no hazardous energy generating in the EUT.	P
2.1.1.6	Manual controls	No such device.	N/A
2.1.1.7	Discharge of capacitors in equipment	Class III equipment. This clause has been considered during the certified power adapter approvals.	N/A
	Measured voltage (V); time-constant (s) .....		—
2.1.1.8	Energy hazards – d.c. mains supply	This product is not intended to be connected to the d.c. mains supply.	N/A
	a) Capacitor connected to the d.c. mains supply ..		N/A



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Clause	Requirement + Test	Result - Remark	Verdict

	b) Internal battery connected to the d.c. mains supply .....		N/A
2.1.1.9	Audio amplifiers .....	There is no audio output connector in this product.	N/A
2.1.2	Protection in service access areas	No maintenance works necessary in operation mode.	N/A
2.1.3	Protection in restricted access locations	It is not intended to be used in restricted locations.	N/A

2.2	SELV circuits		P
2.2.1	General requirements	Class III equipment, supplied by SELV.	P
2.2.2	Voltages under normal conditions (V) .....	Class III equipment, supplied by SELV.	P
2.2.3	Voltages under fault conditions (V) .....	Class III equipment, no hazardous voltage generated inside the EUT.	P
2.2.4	Connection of SELV circuits to other circuits .....	SELV circuit only connected to the SELV circuit.	P

2.3	TNV circuits		N/A
2.3.1	Limits	No TNV circuits inside the EUT.	N/A
	Type of TNV circuits .....		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions .....		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed.....		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed.....		—
2.3.5	Test for operating voltages generated externally		N/A

2.4	Limited current circuits		N/A
2.4.1	General requirements	No limited current circuit inside it.	N/A
2.4.2	Limit values		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Frequency (Hz) .....		—
	Measured current (mA) .....		—
	Measured voltage (V) .....		—
	Measured circuit capacitance (nF or $\mu$ F) .....		—
2.4.3	Connection of limited current circuits to other circuits		N/A

2.5	Limited power sources		P
	a) Inherently limited output		N/A
	b) Impedance limited output	The output of the battery pack & backup battery pack was in compliance with the value in Table 2B for both normal and abnormal condition.	P
	c) Regulating network limited output under normal operating and single fault condition		N/A
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA) .....	For battery pack & backup battery pack, see appended table 2.5.	—
	Current rating of overcurrent protective device (A) .:		—

2.6	Provisions for earthing and bonding		N/A
2.6.1	Protective earthing	Class III equipment, no protective earthing inside the EUT.	N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area ( $\text{mm}^2$ ), AWG .....		—
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area ( $\text{mm}^2$ ), AWG .....		—
	Protective current rating (A), cross-sectional area ( $\text{mm}^2$ ), AWG .....		—



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Clause	Requirement + Test	Result - Remark	Verdict
2.6.3.4	Resistance of earthing conductors and their terminations; resistance ( $\Omega$ ), voltage drop (V), test current (A), duration (min) .....		N/A
2.6.3.5	Colour of insulation.....		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm) .....		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A
2.7	Overcurrent and earth fault protection in primary circuits		N/A
2.7.1	Basic requirements	Class III equipment. Not connected to the a.c. mains directly.	N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices .....		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel.....	No service work was necessary.	N/A
2.8	Safety interlocks		N/A
2.8.1	General principles	There is no safety interlock in the EUT.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (mm) .....		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

2.9	Electrical insulation		P
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic materials are not used.	P
2.9.2	Humidity conditioning	Class III equipment, no critical insulation in the EUT.	N/A
	Relative humidity (%), temperature (°C) .....		—
2.9.3	Grade of insulation	Only the functional Insulation inside the EUT.	P
2.9.4	Separation from hazardous voltages	Class III equipment, supplied by the SELV provided by certified power adapter.	N/A
	Method(s) used .....		—

2.10	Clearances, creepage distances and distances through insulation		N/A
2.10.1	General	Class III equipment, no critical insulation in the EUT.	N/A
2.10.1.1	Frequency .....	Class III equipment.	N/A
2.10.1.2	Pollution degrees .....	This report considered the pollution degree II.	N/A
2.10.1.3	Reduced values for functional insulation	Considered 5.3.4 c).	N/A
2.10.1.4	Intervening unconnected conductive parts	Class III equipment, no critical insulation in the EUT.	N/A
2.10.1.5	Insulation with varying dimensions	Class III equipment, no critical insulation in the EUT.	N/A
2.10.1.6	Special separation requirements	Class III equipment, no critical insulation in the EUT.	N/A



EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.1.7	Insulation in circuits generating starting pulses	No such circuit in the equipment.	N/A
2.10.2	Determination of working voltage	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.2.1	General	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.2.2	RMS working voltage		N/A
2.10.2.3	Peak working voltage		N/A
2.10.3	Clearances		N/A
2.10.3.1	General		N/A
2.10.3.2	Mains transient voltages	Class III equipment. Not connected to the a.c. mains directly.	N/A
	a) AC mains supply .....	Class III equipment. Not connected to the a.c. mains directly.	N/A
	b) Earthed d.c. mains supplies .....	The equipment is not intended to be supplied by the d.c. mains.	N/A
	c) Unearthed d.c. mains supplies .....	The equipment is not intended to be supplied by the d.c. mains.	N/A
	d) Battery operation .....	The equipment is not intended to be supplied by the battery.	N/A
2.10.3.3	Clearances in primary circuits	Class III equipment, no critical insulation in the EUT.	N/A
2.10.3.4	Clearances in secondary circuits	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.3.5	Clearances in circuits having starting pulses	No such circuit.	N/A
2.10.3.6	Transients from a.c. mains supply .....	Class III equipment. Not connected to the a.c. mains directly.	N/A
2.10.3.7	Transients from d.c. mains supply .....	The EUT is not intended to be connected to the d.c. mains.	N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....	The EUT is not connected to the telecommunication network and cable distribution system.	N/A





EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.9	Measurement of transient voltage levels	Class III equipment. Not connected to the mains directly.	N/A
	a) Transients from a mains supply	Class III equipment. Not connected to the mains directly.	N/A
	For an a.c. mains supply .....	Class III equipment. Not connected to the a.c. mains directly.	N/A
	For a d.c. mains supply .....	Class III equipment. Not connected to the d.c. mains directly.	N/A
	b) Transients from a telecommunication network :	Class III equipment. Not connected to the mains directly.	N/A
2.10.4	Creepage distances	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.4.1	General		N/A
2.10.4.2	Material group and comparative tracking index		N/A
	CTI tests .....		—
2.10.4.3	Minimum creepage distances		N/A
2.10.5	Solid insulation		N/A
2.10.5.1	General		N/A
2.10.5.2	Distances through insulation		N/A
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		N/A
2.10.5.5.	Cemented joints		N/A
2.10.5.6	Thin sheet material – General		N/A
2.10.5.7	Separable thin sheet material		N/A
	Number of layers (pcs) .....		—
2.10.5.8	Non-separable thin sheet material	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.5.9	Thin sheet material – standard test procedure	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	Electric strength test		—



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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.10	Thin sheet material – alternative test procedure	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	Electric strength test		—
2.10.5.11	Insulation in wound components	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.5.12	Wire in wound components	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	Working voltage .....		N/A
	a) Basic insulation not under stress .....		N/A
	b) Basic, supplementary, reinforced insulation .....		N/A
	c) Compliance with Annex U .....		N/A
	Two wires in contact inside wound component; angle between 45° and 90° .....		N/A
2.10.5.13	Wire with solvent-based enamel in wound components	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	Working voltage .....		N/A
	- Basic insulation not under stress .....		N/A
	- Supplementary, reinforced insulation .....		N/A
2.10.6	Construction of printed boards	See below.	N/A
2.10.6.1	Uncoated printed boards	Only the functional Insulation inside the EUT. See sub-clause 2.10.1.3.	N/A
2.10.6.2	Coated printed boards	No coated printed boards.	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
2.10.6.4	Insulation between conductors on different layers of a printed board	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs) .....		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components	No such construction.	N/A
2.10.8.1	Sample preparation and preliminary inspection	No such construction.	N/A
2.10.8.2	Thermal conditioning	No such construction.	N/A
2.10.8.3	Electric strength test	No such construction.	N/A
2.10.8.4	Abrasion resistance test	No such construction.	N/A
2.10.9	Thermal cycling	No such construction.	N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound	No such construction. Pollution degree 2 is considered.	N/A
2.10.11	Tests for semiconductor devices and cemented joints	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.12	Enclosed and sealed parts	No hermetically sealed component.	N/A

3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	Internal wiring gauge is suitable for current intended to be carried.	P
3.1.2	Protection against mechanical damage	Wire ways are smooth and free from edges. Wires are adequately fixed to prevent excessive strain on wire and terminals and avoiding damage to the insulation of the conductors.	P
3.1.3	Securing of internal wiring	Internal wiring is secured against excessive strain, loosening of terminals and damage to the conductor insulation.	P



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Clause	Requirement + Test	Result - Remark	Verdict
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage.	P
3.1.5	Beads and ceramic insulators	Not used.	N/A
3.1.6	Screws for electrical contact pressure	No screws of insulating material for electrical connections, or where supplementary or reinforced insulation could be impaired by a metal replacement.	N/A
3.1.7	Insulating materials in electrical connections	No non-metallic materials in electrical connections.	N/A
3.1.8	Self-tapping and spaced thread screws	No self tapping screws are used.	N/A
3.1.9	Termination of conductors	All conductors are reliable secured.	P
	10 N pull test	10 N pull tests performed for all relevant conductors. No hazards caused hereby.	P
3.1.10	Sleeving on wiring	No such sleeves or tubing used.	N/A

3.2	Connection to a mains supply		N/A
3.2.1	Means of connection	See below.	N/A
3.2.1.1	Connection to an a.c. mains supply	Class III equipment. Not directly connected to the a.c. mains.	N/A
3.2.1.2	Connection to a d.c. mains supply	Class III equipment. Not directly connected to d.c. mains.	N/A
3.2.2	Multiple supply connections	Class III equipment. Not directly connected to the mains.	N/A
3.2.3	Permanently connected equipment	Not a permanently connected equipment.	N/A
	Number of conductors, diameter of cable and conduits (mm) .....		—
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type .....		—



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Clause	Requirement + Test	Result - Remark	Verdict

	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG .....		—
3.2.5.2	DC power supply cords	Class III equipment. Not directly connected to d.c. mains.	N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N) .....		—
	Longitudinal displacement (mm) .....		—
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g) .....		—
	Radius of curvature of cord (mm).....		—
3.2.9	Supply wiring space		N/A

3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals	Class III equipment. Not directly connected to the mains.	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm <sup>2</sup> ) .....		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm) .....		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

3.4	Disconnection from the mains supply		N/A
3.4.1	General requirement	Class III equipment. Not directly connected to the mains.	N/A
3.4.2	Disconnect devices		N/A
3.4.3	Permanently connected equipment	The EUT is not permanently connected equipment.	N/A
3.4.4	Parts which remain energized		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment		N/A
3.4.7	Number of poles - three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A

3.5	Interconnection of equipment		P
3.5.1	General requirements	See below.	P
3.5.2	Types of interconnection circuits .....	SELV circuit only connected to SELV circuit.	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection circuits.	N/A
3.5.4	Data ports for additional equipment	The data ports were not intended to supply the power to other accessory.	N/A

4	PHYSICAL REQUIREMENTS		P
4.1	Stability		N/A
	Angle of 10°	Mass less than 7kg.	N/A
	Test force (N) .....	Not floor standing equipment.	N/A

4.2	Mechanical strength		P
4.2.1	General	See below.	P
4.2.2	Steady force test, 10 N	After test, no safety relevant damages.	P
4.2.3	Steady force test, 30 N	No door or cover in the operator access area.	N/A
4.2.4	Steady force test, 250 N	250N applied to enclosure of battery pack & backup battery pack, no energy or other hazards.	P
4.2.5	Impact test	There is no hazardous voltage and energy inside it. The test is not considered necessary.	N/A
	Fall test	There is no hazardous voltage and energy inside it. The test is not considered necessary.	N/A





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Clause	Requirement + Test	Result - Remark	Verdict
	Swing test	There is no hazardous voltage and energy inside it. The test is not considered necessary.	N/A
4.2.6	Drop test; height (mm) .....	No safety relevant damages.	P
4.2.7	Stress relief test	The test was conducted at 83.4°C environments for 7hrs. After the test, no safety relevant damage.	P
4.2.8	Cathode ray tubes	No CRT inside the EUT.	N/A
	Picture tube separately certified .....	No CRT inside the EUT.	N/A
4.2.9	High pressure lamps	No high pressure lamps.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N) .....	No wall mount or ceiling mounted function for the EUT.	N/A

4.3	Design and construction		P
4.3.1	Edges and corners	Edges and corners of the enclosure are rounded.	P
4.3.2	Handles and manual controls; force (N)..... :	No such device.	N/A
4.3.3	Adjustable controls	No such device.	N/A
4.3.4	Securing of parts	Electrical and mechanical connections and parts expected to withstand usual mechanical stress.	P
4.3.5	Connection by plugs and sockets	No mismatch of connectors, plugs or sockets possible.	P
4.3.6	Direct plug-in equipment	Class III equipment.	N/A
	Torque .....		—
	Compliance with the relevant mains plug standard .....	Class III equipment.	N/A
4.3.7	Heating elements in earthed equipment	No heating element.	N/A
4.3.8	Batteries	After testing, no chemical leak, explosion, and emission of flame of the EUT, see appended table.	P
	- Overcharging of a rechargeable battery	See appended table.	P
	- Unintentional charging of a non-rechargeable battery	Rechargeable battery used.	N/A
	- Reverse charging of a rechargeable battery	Not possible to reverse in battery compartment.	P
	- Excessive discharging rate for any battery	(See appended table 4.3.8 and 5.3)	P



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Clause	Requirement + Test	Result - Remark	Verdict
4.3.9	Oil and grease	No oil and grease inside the equipment.	N/A
4.3.10	Dust, powders, liquids and gases	The equipment is not intended to be exposed to dust, powers, liquids and gases.	N/A
4.3.11	Containers for liquids or gases	No container for liquids or gases provided.	N/A
4.3.12	Flammable liquids .....	No flammable liquids in the equipment.	N/A
	Quantity of liquid (l) .....	No flammable liquids in the equipment.	N/A
	Flash point (°C) .....	No flammable liquids in the equipment.	N/A
4.3.13	Radiation	See below.	—
4.3.13.1	General	The energy of the Laser scan engine is Laser class 1 or Laser class 2 and see 4.3.13.5 for detail.	P
4.3.13.2	Ionizing radiation	No ionizing radiation.	N/A
	Measured radiation (pA/kg) .....	No ionizing radiation.	—
	Measured high-voltage (kV) .....	No ionizing radiation.	—
	Measured focus voltage (kV) .....	No ionizing radiation.	—
	CRT markings .....	No ionizing radiation.	—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	No UV radiation.	N/A
	Part, property, retention after test, flammability classification .....	No UV radiation.	N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....	No UV radiation.	N/A
4.3.13.5	Laser (including LEDs)	Considered in Laser scan engine which is UL Demko certified according to IEC 60825-1:2007.  Laser warning labels are marked on the EUT external enclosure.	P
	Laser class .....	Laser class 2 (for Laser scan engine: Optoelectronics Co., Ltd., model: MDL-1000).	—
4.3.13.6	Other types .....	No other type radiation.	N/A
4.4	Protection against hazardous moving parts		N/A
4.4.1	General	No hazardous moving part in operator access areas.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
4.4.2	Protection in operator access areas .....	No hazardous moving part in operator access areas.	N/A
4.4.3	Protection in restricted access locations .....	No hazardous moving part in restricted access areas.	N/A
4.4.4	Protection in service access areas	No hazardous moving in the service access area	N/A

4.5	Thermal requirements		P
4.5.1	General	See below.	P
4.5.2	Temperature tests	(See appended table 4.5.1)	P
	Normal load condition per Annex L .....	(See appended table 1.6.2)	—
4.5.3	Temperature limits for materials	(See appended table 4.5.1)	P
4.5.4	Touch temperature limits	(See appended table 4.5.1)	P
4.5.5	Resistance to abnormal heat .....	No such construction inside EUT. This clause has been considered during the certified power adapter approvals.	N/A

4.6	Openings in enclosures		P
4.6.1	Top and side openings	See Clause 4.6.4.	N/A
	Dimensions (mm) .....		—
4.6.2	Bottoms of fire enclosures	See Clause 4.6.4.	N/A
	Construction of the bottom, dimensions (mm) ..		—
4.6.3	Doors or covers in fire enclosures	No such parts.	N/A
4.6.4	Openings in transportable equipment	No openings provided.	P
4.6.4.1	Constructional design measures	No openings provided.	P
	Dimensions (mm) .....		—
4.6.4.2	Evaluation measures for larger openings	No such openings.	N/A
4.6.4.3	Use of metallized parts	No metallized parts.	N/A
4.6.5	Adhesives for constructional purposes	No adhesives for construction purposes.	N/A
	Conditioning temperature (°C), time (weeks) .....		—

4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	See below.	P
	Method 1, selection and application of components wiring and materials		N/A
	Method 2, application of all of simulated fault condition tests	(See appended table 5.3)	P



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Clause	Requirement + Test	Result - Remark	Verdict
4.7.2	Conditions for a fire enclosure	With having the following components: -components with windings -semiconductor devices, transistors, diodes, integrated circuits. -resistors, capacitors, inductors.	P
4.7.2.1	Parts requiring a fire enclosure		N/A
4.7.2.2	Parts not requiring a fire enclosure	(See appended table 5.3)	P
4.7.3	Materials		—
4.7.3.1	General	(See appended table 5.3)	P
4.7.3.2	Materials for fire enclosures	HB or better	P
4.7.3.3	Materials for components and other parts outside fire enclosures	No such parts.	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures		N/A
4.7.3.5	Materials for air filter assemblies	No air filter provided.	N/A
4.7.3.6	Materials used in high-voltage components	No high-voltage component inside the equipment.	N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		N/A
5.1	Touch current and protective conductor current		N/A
5.1.1	General	Class III equipment, supplied by SELV.	N/A
5.1.2	Configuration of equipment under test (EUT)	Class III equipment, supplied by SELV.	N/A
5.1.2.1	Single connection to an a.c. mains supply	Class III equipment. Not connected to the a.c. mains directly.	N/A
5.1.2.2	Redundant multiple connections to an a.c. mains supply	No such construction.	N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply	No such construction.	N/A
5.1.3	Test circuit	Class III equipment, supplied by SELV.	N/A
5.1.4	Application of measuring instrument	Class III equipment, supplied by SELV.	N/A
5.1.5	Test procedure	Class III equipment, supplied by SELV.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
5.1.6	Test measurements	Class III equipment, supplied by SELV.	N/A
	Supply voltage (V) .....		—
	Measured touch current (mA) .....		—
	Max. allowed touch current (mA) .....		—
	Measured protective conductor current (mA) .....		—
	Max. allowed protective conductor current (mA) ...		—
5.1.7	Equipment with touch current exceeding 3,5 mA	Class III equipment, supplied by SELV and no direct connection to the mains.	N/A
5.1.7.1	General .....	Class III equipment, supplied by SELV and no direct connection to the mains.	N/A
5.1.7.2	Simultaneous multiple connections to the supply	Class III equipment, supplied by SELV and no direct connection to the mains.	N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	EUT is not connected to a telecommunication system and a cable distribution system.	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system	EUT is not connected to a telecommunication system and a cable distribution system.	N/A
	Supply voltage (V) .....		—
	Measured touch current (mA) .....		—
	Max. allowed touch current (mA) .....		—
5.1.8.2	Summation of touch currents from telecommunication networks	Not connected to the telecommunication networks.	N/A
	a) EUT with earthed telecommunication ports .....		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A
5.2	Electric strength		N/A
5.2.1	General	Class III equipment, supplied by SELV and not directly connected to the mains.	N/A
5.2.2	Test procedure	Class III equipment, supplied by SELV and not directly connected to the mains.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	(See appended table 5.3)	P
5.3.2	Motors	(see appended table 5.3)	P
5.3.3	Transformers	No transformers.	N/A
5.3.4	Functional insulation.....:	Method c) used. Result see appended table 5.3	P
5.3.5	Electromechanical components	No electromechanical component.	N/A
5.3.6	Audio amplifiers in ITE .....	There is no audio output connector in this product.	N/A
5.3.7	Simulation of faults	See appended table 5.3	P
5.3.8	Unattended equipment	The equipment was not for unattended use.	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	See below.	P
5.3.9.1	During the tests	No fire propagated beyond the equipment. No molten metal was emitted.	P
5.3.9.2	After the tests	No consequent testing necessary.	N/A

6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements	No connection to the telecommunication network.	N/A
	Supply voltage (V) .....		—
	Current in the test circuit (mA) .....		—
6.1.2.2	Exclusions .....		N/A

6.2	Protection of equipment users from overvoltages on telecommunication networks		N/A
6.2.1	Separation requirements	No connection to the telecommunication network.	N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A





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Clause	Requirement + Test	Result - Remark	Verdict
6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A) .....	The EUT is not intended to supply other units via telecommunication line.	—
	Current limiting method .....		—
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N/A
7.1	General	No connection to the cable distribution system.	N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		N/A



EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)	The mass of the EUT is less than 18 kg.	N/A
A.1.1	Samples .....		—
	Wall thickness (mm).....		—
A.1.2	Conditioning of samples; temperature (°C) .....		N/A
A.1.3	Mounting of samples .....		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D .....		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s) .....		—
	Sample 2 burning time (s) .....		—
	Sample 3 burning time (s) .....		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material.....		—
	Wall thickness (mm).....		—
A.2.2	Conditioning of samples; temperature (°C) ... ..		N/A
A.2.3	Mounting of samples .....		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C .....		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s) .....		—
	Sample 2 burning time (s) .....		—
	Sample 3 burning time (s) .....		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s) .....		—
	Sample 2 burning time (s) .....		—
	Sample 3 burning time (s) .....		—
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A



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Clause	Requirement + Test	Result - Remark	Verdict

A.3.3	Compliance criterion		N/A
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B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		P
B.1	General requirements	The vibrator was in compliance with the requirement.	P
	Position .....	See appended table 1.5.1.	—
	Manufacturer .....	See appended table 1.5.1.	—
	Type .....	See appended table 1.5.1.	—
	Rated values .....	See appended table 1.5.1.	—
B.2	Test conditions	The tests were carried out under simulated conditions on the bench.	P
B.3	Maximum temperatures	See appended table 5.3.	P
B.4	Running overload test	Not carried out due to the design of electronic drive circuit.	N/A
B.5	Locked-rotor overload test	The motor is the secondary motor.	N/A
	Test duration (days) .....		—
	Electric strength test: test voltage (V) .....		—
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V) .....		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits	See below.	P
B.7.1	General	See below.	P
B.7.2	Test procedure	See below, the alternative test procedure used.	P
B.7.3	Alternative test procedure	See appended table 5.3. No ignition of the wrapping tissue and cheesecloth.	P
B.7.4	Electric strength test; test voltage (V) .....		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A



EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

	Operating voltage (V) .....		—
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C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		N/A
	Position .....	Class III equipment, supplied by the SELV provided by the certified power adapter.	—
	Manufacturer .....		—
	Type .....		—
	Rated values .....		—
	Method of protection.....		—
C.1	Overload test		N/A
C.2	Insulation		N/A
	Protection from displacement of windings.....		N/A

D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		N/A
D.1	Measuring instrument	Class III equipment, supplied by SELV and no direct connection to the mains.	N/A
D.2	Alternative measuring instrument		N/A

E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
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F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		N/A
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G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances	Not used.	N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply .....		N/A
G.2.2	Earthed d.c. mains supplies .....		N/A
G.2.3	Unearthed d.c. mains supplies .....		N/A
G.2.4	Battery operation .....		N/A



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G.3	Determination of telecommunication network transient voltage (V) .....		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks .....		N/A
G.4.2	Transients from telecommunication networks .....		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	Determination of minimum clearances .....		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N/A
	Metal(s) used .....		—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A
K.1	Making and breaking capacity	No thermal control inside the EUT.	N/A
K.2	Thermostat reliability; operating voltage (V) .....		N/A
K.3	Thermostat endurance test; operating voltage (V) .....		N/A
K.4	Temperature limiter endurance; operating voltage (V) .....		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		P
L.1	Typewriters	No such device in the EUT.	N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A



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L.6	Motor-operated files		N/A
L.7	Other business equipment		P

M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
M.1	Introduction	No phone ringing was generated in the EUT.	N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz) .....		—
M.3.1.2	Voltage (V) .....		—
M.3.1.3	Cadence; time (s), voltage (V) .....		—
M.3.1.4	Single fault current (mA) .....		—
M.3.2	Tripping device and monitoring voltage .....		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) .....		N/A

N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		N/A
N.1	ITU-T impulse test generators	Not used.	N/A
N.2	IEC 60065 impulse test generator		N/A

P	ANNEX P, NORMATIVE REFERENCES		—
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Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		N/A
	a) Preferred climatic categories .....	No such component.	N/A
	b) Maximum continuous voltage .....		N/A
	c) Pulse current .....		N/A

R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)	Not used.	N/A
R.2	Reduced clearances (see 2.10.3)		N/A



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S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment	No connection to the telecommunication network.	N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A

T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
			—

U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N/A
		Class III equipment.	—

V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		N/A
V.1	Introduction	Class III equipment, supplied by the SELV provided by the certified power adapter.	N/A
V.2	TN power distribution systems		N/A

W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A
W.1	Touch current from electronic circuits	No touch current summation.	N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A

X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
X.1	Determination of maximum input current	Class III equipment.	N/A
X.2	Overload test procedure		N/A

Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus .....	Not used.	N/A
Y.2	Mounting of test samples .....		N/A
Y.3	Carbon-arc light-exposure apparatus .....		N/A



A D T

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Y.4	Xenon-arc light exposure apparatus .....		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		N/A
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—





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EN 60950-1:2006 + A11:2009 + A1:2010 – CENELEC COMMON MODIFICATIONS						
Contents	Add the following annexes:  Annex ZA (normative)                      Normative references to international publications with their corresponding European publications  Annex ZB (normative)                      Special national conditions					N/A
General	Delete all the “country” notes in the reference document according to the following list:  1.4.8      Note 2                      1.5.1      Note 2 & 3                      1.5.7.1      Note 1.5.8      Note 2                      1.5.9.4      Note                      1.7.2.1      Note 4, 5 & 6 2.2.3      Note                      2.2.4      Note                      2.3.2      Note 2.3.2.1      Note 2                      2.3.4      Note 2                      2.6.3.3      Note 2 & 3 2.7.1      Note                      2.10.3.2      Note 2                      2.10.5.13      Note 3 3.2.1.1      Note                      3.2.4      Note 3. 4.3.6      Note 1 & 2                      4.7      Note 4                      4.7.2.2      Note 4.7.3.1      Note 2                      5.1.7.1      Note 3 & 4                      5.3.7      Note 1 6      Note 2 & 5                      6.1.2.1      Note 2                      6.1.2.2      Note 6.2.2      Note 6. 7.1      Note 3                      7.2      Note                      7.3      Note 1 & 2 G.2.1      Note 2                      Annex H      Note 2					N/A
General	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list:  1.5.7.1 Note                      6.1.2.1 Note 2 6.2.2.1 Note 2                      EE.3                      Note					N/A
1.3.Z1	Add the following subclause:  1.3.Z1 Exposure to excessive sound pressure  The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones.  NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for “one package equipment”, and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.					P
1.5.1	Add the following NOTE:  NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC					N/A
1.7.2.1	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.					N/A

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Clause	Requirement + Test	Result - Remark	Verdict															
2.7.1	<p>Replace the subclause as follows:</p> <p>Basic requirements</p> <p>To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment;</p> <p>b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;</p> <p>c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>		N/A															
2.7.2	This subclause has been declared 'void'.		N/A															
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A															
3.2.5.1	<p>Replace "60245 IEC 53" by "H05 RR-F";</p> <p>"60227 IEC 52" by "H03 VV-F or H03 VVH2-F";</p> <p>"60227 IEC 53" by "H05 VV-F or H05 VVH2-F2".</p> <p>In Table 3B, replace the first four lines by the following:</p> <table><tr><td>  Up to and including 6</td><td> </td><td></td><td>0,75 <sup>a)</sup></td><td> </td></tr><tr><td>  Over 6 up to and including 10</td><td> </td><td>(0,75) <sup>b)</sup></td><td>1,0</td><td> </td></tr><tr><td>  Over 10 up to and including 16</td><td> </td><td>(1,0) <sup>c)</sup></td><td>1,5</td><td> </td></tr></table> <p>In the conditions applicable to Table 3B delete the words "in some countries" in condition <sup>a)</sup>.</p> <p>In NOTE 1, applicable to Table 3B, delete the second sentence.</p>	Up to and including 6			0,75 <sup>a)</sup>		Over 6 up to and including 10		(0,75) <sup>b)</sup>	1,0		Over 10 up to and including 16		(1,0) <sup>c)</sup>	1,5			N/A
Up to and including 6			0,75 <sup>a)</sup>															
Over 6 up to and including 10		(0,75) <sup>b)</sup>	1,0															
Over 10 up to and including 16		(1,0) <sup>c)</sup>	1,5															
3.3.4	<p>In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following:</p> <table><tr><td>  Over 10 up to and including 16</td><td> </td><td>1,5 to 2,5</td><td> </td><td>1,5 to 4</td><td> </td></tr></table> <p>Delete the fifth line: conductor sizes for 13 to 16 A.</p>	Over 10 up to and including 16		1,5 to 2,5		1,5 to 4			N/A									
Over 10 up to and including 16		1,5 to 2,5		1,5 to 4														
4.3.13.6	<p>Replace the existing NOTE by the following:</p> <p>NOTE Z1 Attention is drawn to:</p> <p>1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and</p> <p>2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation).</p>		N/A															
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A															



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Annex H	<p>Replace the last paragraph of this annex by:</p> <p>At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 <math>\mu</math>Sv/h (0,1 mR/h) (see NOTE). Account is taken of the background level.</p> <p>Replace the notes as follows:</p> <p>NOTE These values appear in Directive 96/29/Euratom.</p> <p>Delete NOTE 2.</p>		N/A
Bibliography	Additional EN standards.		—

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS					—
	<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>	
	IEC 60065 (mod) A1	2001 2005	Audio, video and similar electronic apparatus - Safety requirements	EN 60065 A1 + A11 A2	2002 2006 2008 - <sup>1)</sup>	
	A2	- <sup>1)</sup>				
	IEC 60068-2-78	- <sup>2)</sup>	Environmental testing Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	2001 <sup>3)</sup>	
	IEC 60073	- <sup>2)</sup>	Basic and safety principles for man-machine interface, marking and identification - Coding principles for indication devices and actuators	EN 60073	2002 <sup>3)</sup>	
	IEC 60083	- <sup>2)</sup>	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	-	-	
	IEC 60085	2004	Electrical insulation - Thermal classification	EN 60085	2004	
	IEC 60112	- <sup>2)</sup>	Method for determining the proof and comparative tracking indices of insulating materials	EN 60112	2003 <sup>3)</sup>	
	IEC 60216-4-1	- <sup>2)</sup>	Guide for the determination of thermal endurance properties of electrical insulating materials Part 4: Ageing ovens Section 1: Single-chamber ovens	EN 60216-4-1	2006 <sup>3)</sup>	
	IEC 60227 (mod)	Series	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V	HD 21 <sup>4)</sup>	Series	
	IEC 60245 (mod)	Series	Rubber insulated cables of rated voltages up to and including 450/750V	HD 22 <sup>5)</sup>	Series	
	<hr/>					
	<sup>1)</sup> At draft stage.					
	<sup>2)</sup> Undated reference.					
	<sup>3)</sup> Valid edition at date of issue.					
	<sup>4)</sup> The HD 21 series is related to, but not directly equivalent with the IEC 60227 series.					
	<sup>5)</sup> The HD 22 series is related to, but not directly equivalent with the IEC 60245 series.					

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Clause	Requirement + Test			Result - Remark	Verdict
	<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
	IEC 60309 (mod)	Series	Plugs, socket-outlets and couplers for industrial purposes	EN 60309	Series
	IEC 60317	Series	Specifications for particular types of winding wires	EN 60317	Series
	IEC 60317-43	- <sup>2)</sup>	Part 43: Aromatic polyimide tape wrapped round copper wire, class 240	EN 60317-43	1997 <sup>3)</sup>
	IEC 60320 (mod)	Series	Appliance couplers for household and similar general purposes	EN 60320	Series
	IEC 60384-1 (mod)	2001	Electrical installations of buildings Part 1: Fundamental principles, assessment of general characteristics, definitions	HD 384.1 S2	2001
	IEC 60384-14 A1	1993 1995	Fixed capacitors for use in electronic equipment Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	EN 132400 <sup>6)</sup>	1994
	IEC 60417	Data-base	Graphical symbols for use on equipment	-	-
	IEC 60664-1 + A1 + A2	1992 2000 2002	Insulation coordination for equipment within low-voltage systems Part 1: Principles, requirements and tests	EN 60664-1	2003
	IEC 60695-2-11	- <sup>2)</sup>	Fire hazard testing Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products	EN 60695-2-11	2001 <sup>3)</sup>
	IEC 60695-2-20	- <sup>2)</sup>	Part 2-20: Glowing/hot-wire based test methods - Hot-wire coil ignitability - Apparatus, test method and guidance	-	-
	IEC 60695-10-2	- <sup>2)</sup>	Part 10-2: Guidance and test methods for the minimization of the effects of abnormal heat on electrotechnical products involved in fires - Method for testing products made from non-metallic materials for resistance to heat using the ball pressure test	EN 60695-10-2	2003 <sup>3)</sup>
	IEC 60695-11-3	- <sup>2)</sup>	Part 11-3: Test flames - 500 W flames - Apparatus and confirmational test methods	-	-
	IEC 60695-11-4	- <sup>2)</sup>	Part 11-4: Test flames - 50 W flames - Apparatus and confirmational test methods	-	-
	IEC 60695-11-10 A1	- <sup>2)</sup>	Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10 A1	1999 <sup>3)</sup> 2003 <sup>3)</sup>
	<sup>6)</sup> EN 132400, Sectional Specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains (Assessment level D), and its amendments are related to, but not directly equivalent to IEC 60384-14. They are superseded by EN 60384-14:2005, which is based on IEC 60384-14:2005.				

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	IEC 60695-11-20 A1	- <sup>2)</sup>	Part 11-20: Test flames - 500 W flame test methods	EN 60695-11-20 A1	1999 <sup>3)</sup> 2003 <sup>3)</sup>
	IEC 60730-1 (mod) A1	1999 2003	Automatic electrical controls for household and similar use Part 1: General requirements	EN 60730-1 A1 + A12 + A13 + A14 + A16 A2	2000 2004 2003 2004 2005 2007 2008
	A2	2007			
	IEC 60747-5-5	2007	Semiconductor devices - Discrete devices Part 5-5: Optoelectronic devices - Photocouplers	EN 60747-5-5	- <sup>1)</sup>
	IEC 60825-1	- <sup>2)</sup>	Safety of laser products Part 1: Equipment classification, requirements and user's guide	EN 60825-1	2007 <sup>3)</sup>
	IEC 60825-2	- <sup>2)</sup>	Part 2: Safety of optical fibre communication systems	EN 60825-2 A1	2004 <sup>3)</sup> 2007 <sup>3)</sup>
	IEC/TR 60825-9	- <sup>2)</sup>	Part 9: Compilation of maximum permissible exposure to incoherent optical radiation	-	-
	IEC 60825-12	- <sup>2)</sup>	Part 12: Safety of free space optical communication systems used for transmission of information	EN 60825-12	2004 <sup>3)</sup>
	IEC 60851-3 A1	1996 1997	Winding wires - Test methods Part 3: Mechanical properties	EN 60851-3 A1	1996 1997
	IEC 60851-5 A1 A2	1996 1997 2004	Part 5: Electrical properties	EN 60851-5 A1 A2	1996 1997 2004
	IEC 60851-6	1996	Part 6: Thermal properties	EN 60851-6	1996
	IEC 60885-1	1987	Electrical test methods for electric cables Part 1: Electrical tests for cables, cords and wires for voltages up to and including 450/750 V	-	-
	IEC 60906-1	- <sup>2)</sup>	IEC System of plugs and socket-outlet for household and similar purposes Part 1: Plugs and socket-outlets 16 A 250 V a.c.	-	-
	IEC 60906-2	- <sup>2)</sup>	Part 2: Plugs and socket-outlets 15 A 125 V a.c.	-	-
	IEC 60947-1	2004	Low voltage switchgear and control gear Part 1: General rules	EN 60947-1	2004
	IEC 60990	1999	Methods of measurement of touch current and protective conductor current	EN 60990	1999

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	<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
	IEC 61051-2	1991	Varistors for use in electronic equipment Part 2: Sectional specification for surge suppression varistors	-	-
	IEC 61058-1 (mod)	2000	Switches for appliances Part 1: General requirements	EN 61058-1 <sup>7)</sup>	2002
	ISO 178	- <sup>2)</sup>	Plastics - Determination of flexural properties	EN ISO 178	2003 <sup>3)</sup>
	ISO 179	Series	Plastics - Determination of Charpy impact strength	EN ISO 179	Series
	ISO 180	- <sup>2)</sup>	Plastics - Determination of Izod impact strength	EN ISO 180	2000 <sup>3)</sup>
	ISO 261	- <sup>2)</sup>	ISO general-purpose metric screw threads - General plan	-	-
	ISO 262	- <sup>2)</sup>	ISO general-purpose metric screw threads - Selected sizes for screws, bolts and nuts	-	-
	ISO 527	Series	Plastics - Determination of tensile properties	EN ISO 527	Series
	ISO 3884	Series	Safety colours and safety signs	-	-
	ISO 4892-1	- <sup>2)</sup>	Plastics - Methods of exposure to laboratory light sources Part 1: General guidance	EN ISO 4892-1	2000 <sup>3)</sup>
	ISO 4892-2	- <sup>2)</sup>	Part 2: Xenon-arc sources	EN ISO 4892-2	2006 <sup>3)</sup>
	ISO 4892-4	- <sup>2)</sup>	Part 4: Open-flame carbon-arc lamps	-	-
	ISO 7000	Data- base	Graphical symbols for use on equipment - Index and synopsis	-	-
	ISO 8256	- <sup>2)</sup>	Plastics - Determination of tensile-impact strength	EN ISO 8256	2004 <sup>3)</sup>
	ISO 9772	- <sup>2)</sup>	Cellular plastics - Determination of horizontal burning characteristics of small specimens subjected to a small flame	-	-
	ISO 9773	- <sup>2)</sup>	Plastics - Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source	EN ISO 9773	1998 <sup>3)</sup>
	ITU-T Recommendation K.44	- <sup>2)</sup>	Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents - Basic Recommendation	-	-
	<sup>7)</sup> EN 61058-1:2002 includes A1:2001 to IEC 61058-1:2000.				



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ZB	SPECIAL NATIONAL CONDITIONS		N/A
1.2.4.1	In <b>Denmark</b> , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		N/A
1.2.13.14	In <b>Norway</b> and <b>Sweden</b> , for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1	In <b>Finland, Norway</b> and <b>Sweden</b> , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.8	In <b>Norway</b> , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
1.5.9.4	In <b>Finland, Norway</b> and <b>Sweden</b> , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	<p>In <b>Finland, Norway</b> and <b>Sweden</b>, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Finland: "Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p>		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	<p>In <b>Norway</b> and <b>Sweden</b>, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system.</p> <p>It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer.</p> <p>The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in:</p> <p>“Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11).”</p> <p>NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p> <p>Translation to Norwegian (the Swedish text will also be accepted in Norway):</p> <p>“Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.”</p> <p>Translation to Swedish:</p> <p>”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”</p>		N/A
1.7.5	<p>In <b>Denmark</b>, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.</p> <p>For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.</p>		N/A
2.2.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.2	In <b>Finland, Norway</b> and <b>Sweden</b> there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.6.3.3	In the <b>United Kingdom</b> , the current rating of the circuit shall be taken as 13 A, not 16 A.		N/A





EN 60950-1																											
Clause	Requirement + Test	Result - Remark	Verdict																								
2.7.1	In the <b>United Kingdom</b> , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.		N/A																								
2.10.5.13	In <b>Finland, Norway and Sweden</b> , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A																								
3.2.1.1	<p>In <b>Switzerland</b>, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:</p> <table> <tr> <td>SEV 6532-2.1991</td><td>Plug Type 15</td><td>3P+N+PE</td><td>250/400 V, 10 A</td></tr> <tr> <td>SEV 6533-2.1991</td><td>Plug Type 11</td><td>L+N</td><td>250 V, 10 A</td></tr> <tr> <td>SEV 6534-2.1991</td><td>Plug Type 12</td><td>L+N+PE</td><td>250 V, 10 A</td></tr> </table> <p>In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998:</p> <table> <tr> <td>SEV 5932-2.1998</td><td>Plug Type 25</td><td>3L+N+PE</td><td>230/400 V, 16 A</td></tr> <tr> <td>SEV 5933-2.1998</td><td>Plug Type 21</td><td>L+N</td><td>250 V, 16 A</td></tr> <tr> <td>SEV 5934-2.1998</td><td>Plug Type 23</td><td>L+N+PE</td><td>250 V, 16 A</td></tr> </table>	SEV 6532-2.1991	Plug Type 15	3P+N+PE	250/400 V, 10 A	SEV 6533-2.1991	Plug Type 11	L+N	250 V, 10 A	SEV 6534-2.1991	Plug Type 12	L+N+PE	250 V, 10 A	SEV 5932-2.1998	Plug Type 25	3L+N+PE	230/400 V, 16 A	SEV 5933-2.1998	Plug Type 21	L+N	250 V, 16 A	SEV 5934-2.1998	Plug Type 23	L+N+PE	250 V, 16 A		N/A
SEV 6532-2.1991	Plug Type 15	3P+N+PE	250/400 V, 10 A																								
SEV 6533-2.1991	Plug Type 11	L+N	250 V, 10 A																								
SEV 6534-2.1991	Plug Type 12	L+N+PE	250 V, 10 A																								
SEV 5932-2.1998	Plug Type 25	3L+N+PE	230/400 V, 16 A																								
SEV 5933-2.1998	Plug Type 21	L+N	250 V, 16 A																								
SEV 5934-2.1998	Plug Type 23	L+N+PE	250 V, 16 A																								
3.2.1.1	<p>In <b>Denmark</b>, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.</p>		N/A																								
3.2.1.1	<p>In <b>Spain</b>, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994.</p> <p>Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994.</p> <p>If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.</p>		N/A																								



EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In the <b>United Kingdom</b> , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations.  NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.1.1	In <b>Ireland</b> , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		N/A
3.2.4	In <b>Switzerland</b> , for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the <b>United Kingdom</b> , a power supply cord with conductor of 1,25 mm <sup>2</sup> is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the <b>United Kingdom</b> , the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is:  • 1,25 mm <sup>2</sup> to 1,5 mm <sup>2</sup> nominal cross-sectional area.		N/A
4.3.6	In the <b>United Kingdom</b> , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A
4.3.6	In <b>Ireland</b> , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/A
5.1.7.1	In <b>Finland, Norway and Sweden</b> TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment:  • STATIONARY PLUGGABLE EQUIPMENT TYPE A that ◦ is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and ◦ has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and ◦ is provided with instructions for the installation of that conductor by a SERVICE PERSON;  • STATIONARY PLUGGABLE EQUIPMENT TYPE B;  • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A



EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1	<p>In <b>Finland, Norway</b> and <b>Sweden</b>, add the following text between the first and second paragraph of the compliance clause:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"><li>- two layers of thin sheet material, each of which shall pass the electric strength test below, or</li><li>- one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.</li></ul> <p>Alternatively for components, there is no distance through insulation requirements for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"><li>- passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and</li><li>- is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.</li></ul>		N/A
6.1.2.2	<p>In <b>Finland, Norway</b> and <b>Sweden</b>, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.</p>		N/A
7.2	<p>In <b>Finland, Norway</b> and <b>Sweden</b>, for requirements see 6.1.2.1 and 6.1.2.2 of this annex.</p> <p>The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.</p>		N/A
7.3	<p>In <b>Norway</b> and <b>Sweden</b>, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.</p>		N/A
7.3	<p>In <b>Norway</b>, for installation conditions see EN 60728-11:2005.</p>		N/A



EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical components				
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity <sup>1)</sup>
Power adapter (for model SC900)	Powertron Electronics Corp.	PA1008- 050SI100	Input: 100- 240Vac, 50- 60Hz, 0.3A MAX., Class II, Tma: 40°C.  Output: 5Vdc, 1A.,  The output complied with LPS.	IEC 60950- 1:2005 (2nd Edition)	CB (issue by TUV Rheinland, CB Ref Certificate No.: JPTUV-037098)
Docking (Optional) <sup>a)</sup>	Various	Various	O/P: 5Vdc, 1.5A, Tma: 50°C. The output complied with L.P.S.	EN 60950- 1:2006 + A11, IEC 60950-1: 2005 (2nd Edition)	TUV or CB or equivalent
Laser Scanner Module	Optoelectronics Co., Ltd.	MDL-1000	3.3 Vdc, 0.87 mW, Wavelength 650 nm Laser class 1	IEC 60825-1 : 2007	CB by UL
LCD module	Powertip Tech. Corp.	PH240320T- 031-L49Q	2.8", a-Si "TFT type, with LED backlight design.	EN 60950-1	Tested in the appliance.
Vibration Motor	Chongqing Linglong Electronic Co.,Ltd.	Y0411A- 300250613- 0021	3Vdc, 90mA max..	EN 60950-1	Tested in the appliance.
Speaker	--	--	8 Ω, 1 W	EN 60950-1	Tested in the appliance.
Enclosure Material	Various	Various	HB or better.	UL 94	UL
PWB	Various	Various	V-1 min, min. 105°C.	UL 796	UL
Backup battery (one provided)	RPC Corporation	AE471024P8H	3.7V, 75mAh (Typical) / 70mAh (Minimum), Lithium-ion Polymer	EN 60950-1	Tested in the appliance.



EN 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
- Cell	Advanced Electronics Energy Ltd	AE471024P	Max Charging Voltage: 4.5V, Max Charging Current: 58mA.	UL 1642	UL
- MOSFET	Sino-Mos Technology Crop.	SMS8205	VDSS: 20V, ID: 4A	EN 60950-1	Tested in the appliance.
- Protection IC	Seiko Instruments Inc.	S-8261ABJMD-G3J-T2G	V <sub>DSOP1</sub> : 8V max., V <sub>DSOP2</sub> : 28V max., I <sub>OP1</sub> : 7uA, max., I <sub>PDN</sub> : 0.1uA max..	EN 60950-1	Tested in the appliance.
- PWB	Various	Various	V-1 min, min. 105°C.	UL 796	UL
Battery Pack	ETI CA Battery Inc.	BP08-000670	3.7Vdc, 1840mAh/6.8Wh Lithium-ion Polymer	EN 60950-1	Tested in the appliance.
- Cell (two provided)	Sanyo Energy (U S A) Corp	UF463450FP	Max Charging Voltage: 4.4V, Max Charging Current: 1940mA.	UL 1642	UL
- MOSFET	Alpha & Omega Semiconductor, Ltd.	AON5802B	V <sub>DS</sub> : 30Vdc, ID: 7.2A	EN 60950-1	Tested in the appliance.
- Protection IC	Seiko Instruments Inc.	S-8211C	V <sub>DSOP1</sub> : 8V max., V <sub>DSOP2</sub> : 28V max., I <sub>OP1</sub> : 5.5uA, max., I <sub>PDN</sub> : 0.2uA max..	EN 60950-1	Tested in the appliance.
- PTC (Polyswitch)	Fuzetec Technology Co., Ltd.	FLT70F	0.7A, 24Vdc, Tripping current 1.5A	EN 60738-1	TUV
- Enclosure of battery pack	Various	Various	HB or better.	UL 94	UL
- PWB	Various	Various	V-1 min, min. 105°C.	UL 796	UL
<sup>1)</sup> An asterisk indicates a mark which assures the agreed level of surveillance					
Supplementary information:					
<sup>a)</sup> see acceptance conditions in "General product information" page 5.					



EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

<b>1.6.2</b>	<b>TABLE: Electrical data (in normal conditions)</b>					<b>P</b>
U (V)	I (A)	I <sub>rated</sub> (A)	P (W)	Fuse #	I <sub>fuse</sub> (A)	Condition/status
<b>Test on model SC900</b>						
5Vdc	1	0.439	2.195	--	--	Maximum normal load (Power from adapter with battery charge for EUT)
5Vdc	1.5	1.181	5.905	--	--	Maximum normal load (Power from docking with battery charge for EUT)
3.7Vdc	--	0.376	1.391	--	--	Maximum normal load (Power from battery discharge)
<b>Test on model M1000</b>						
5Vdc	1.5	1.177	5.885	--	--	Maximum normal load (Power from docking with battery charge for EUT)
3.7Vdc	--	0.371	1.372	--	--	Maximum normal load (Power from battery discharge)
Supplementary information:						

<b>2.1.1.7</b>	<b>TABLE: discharge test</b>				<b>N/A</b>
Condition	$\tau$ calculated (s)	$\tau$ measured (s)	t <sub>u→0V</sub>	Comments	
--	--	--	--	--	

<b>2.2.2</b>	<b>TABLE: hazardous voltage (circuit) measurement test</b>				<b>N/A</b>
Transformer		Location	Maximum Voltage		Voltage Limiting
			peak	DC	Component
--		--	--	--	--

<b>2.2.2</b>	<b>TABLE: SELV reliability test</b>				<b>N/A</b>
Accessible Part		Voltage Limiting Component	Fault	Maximum V <sub>pk</sub> / dc	Duration (ms)
From	To				
--	--	--	--	--	--



EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

<b>2.4</b>	<b>TABLE: limited current circuit measurement</b>			N/A
Location	Voltage (V)	Current (mA)	Comments	
--	--	--	--	

2.5	TABLE: limited power source measurement			P
Location		Limits	Measured	Comments
Backup battery				
Battery Pack output (Normal)		100VA, 8A	2.934VA, 0.9A	Uoc = 4.25V
Battery Pack output (B- to P- short)		100VA, 8A	5.372VA, 1.7A	Uoc = 4.25V
Battery Pack				
Battery Pack output (Normal)		100VA, 8A	7.464VA, 2.4A	Uoc = 4.25V
Battery Pack output (B- to P- short)		100VA, 8A	9.693VA, 2.7A	Uoc = 4.25V

<b>2.6.3.4 and 2.6.1</b>	<b>TABLE: ground continue test</b>			N/A
Location	resistant measures ( $\Omega$ )	comments		
--	--	--		

<b>2.10.2</b>	<b>TABLE: working voltage measurement test</b>			N/A
Location	rms voltage	peak voltage (V)	Comments	
--	--	--	--	



EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

<b>2.10.3 and 2.10.4</b>	<b>TABLE: Clearance and creepage distance measurements</b>					N/A
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional:						
--	--	--	--	--	--	--
Basic/supplementary:						
--	--	--	--	--	--	--
Reinforced:						
--	--	--	--	--	--	--
Supplementary information:						

<b>2.10.5</b>	<b>TABLE: Distance through insulation measurements</b>				N/A
Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
--	--	--	--	--	--
Supplementary information:					





EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.3.8	TABLE: Batteries								P	
The tests of 4.3.8 are applicable only when appropriate battery data is not available					--				N/A	
Is it possible to install the battery in a reverse polarity position?					Customized connector used for battery pack.				N/A	
	Non-rechargeable batteries			Rechargeable batteries						
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging		
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	
Backup battery										
Max. current during normal condition	--	--	--	0.001 A	0.07 A	0.033 A	0.14 A	--	--	
Max. current during fault condition main board (B- to P- short)	--	--	--	0.001 A	0.07 A	0.037 A	0.14 A	--	--	
Max. current during fault condition (U1105 Pin 4 to Pin 3 short)	--	--	--	0.069 A	0.07 A	--	--	--	--	
Battery Pack										
Max. current during normal condition	--	--	--	0.001 A	1.1 A	0.376 A	0.92 A	--	--	
Max. current during fault condition main board (U2 Pin 1, 2 to 5, 6 short)	--	--	--	0.001 A	1.1 A	0.388 A	0.92 A	--	--	



EN 60950-1									
Clause	Requirement + Test				Result - Remark				Verdict
4.3.8	TABLE: Batteries								P
The tests of 4.3.8 are applicable only when appropriate battery data is not available					--				N/A
Is it possible to install the battery in a reverse polarity position?					Customized connector used for battery pack.				N/A
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during fault condition (U1101 Pin 5 to Pin 15 short)	--	--	--	1.079 A	1.1 A	--	--	--	--
Note: See appended table 5.3 in detail.									
Test results:									Verdict
- Chemical leaks					No Chemical leaks.				P
- Explosion of the battery					No Explosion.				P
- Emission of flame or expulsion of molten metal					No flam or molten.				P
- Electric strength tests of equipment after completion of tests					No isolation requirement.				N/A
Supplementary information:									



EN 60950-1							
Clause	Requirement + Test				Result - Remark		Verdict
4.5	TABLE: Thermal requirements						P
	Supply voltage (V) .....	See below.				—	
	Ambient T <sub>min</sub> (°C) .....	--	--	--	—		
	Ambient T <sub>max</sub> (°C) .....	--	--	--	—		
Maximum measured temperature T of part/at:		T (°C)				Allowed T <sub>max</sub> (°C)	
1) for EUT (Power from power adapter with battery pack charging)							
2) for EUT (Power from docking with battery pack charging)							
3) for EUT (Power from battery pack)							
Supply voltage (V)		5Vdc	5Vdc	3.7Vdc	--		
Ambient		1) T <sub>ma</sub> =50 °C (24.3 °C)	2) T <sub>ma</sub> =50 °C (23.2 °C)	3) T <sub>ma</sub> =50 °C (24.4 °C)	--		
PWB under U1		78.6	71.4	71.7	105		
PWB under U701		76.3	70.8	69.1	105		
PWB under U301		77.5	65.7	70.7	105		
Panel body		75.7	68.7	66.9	75		
Motor body		66.0	69.8	60.3	105		
Battery pack body		61.2	67.3	56.9	100		
Backup pack body		62.8	68.7	58.4	100		
Enclosure inside near battery		58.4	62.7	55.8	--		
Enclosure outside near battery		56.5	59.5	53.5	75		
Power Adapter							
Supply voltage (V)		90Vac		264Vac		--	
Ambient		T <sub>ma</sub> =50 °C (25.3 °C)		T <sub>ma</sub> =50 °C (25.3 °C)		--	
PWB under U1		61.3		61.4		105	
C1 body		62.0		62.6		105	
T1 coil		66.2		67.8		110	
T1 core		64.1		65.3		110	
CY1 body		60.9		61.9		125	
Enclosure inside near T1		57.9		58.7		--	
Enclosure outside near T1		55.5		56.0		95	
Supplementary information:							
Temperature T of winding:	t <sub>1</sub> (°C)	R <sub>1</sub> (Ω)	t <sub>2</sub> (°C)	R <sub>2</sub> (Ω)	T (°C)	Allowed T <sub>max</sub> (°C)	Insulation class
--	--	--	--	--	--	--	--
Supplementary information:							



EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

**Comments**

The temperatures were measured under worst case normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltage as described above.

The max. ambient temperature  $T_{max}$  is defined at 50°C. Therefore the maximum temperatures measured are recalculated

Winding components:

**Power adapter**

- Class A  $T_{max} = 120\text{ °C} - 10\text{ °C} = 110\text{ °C}$  (T1)

**EUT**

Components with: User accessible area:

- max. absolute temp. of 105 °C →  $T_{max}$  (Battery pack & Backup pack) = 100 °C
- max. absolute temp. of 105 °C →  $T_{max}$  (PWB, Motor) = 105°C

**Power adapter**

- max. absolute temp. of 105 °C →  $T_{max}$  (PWB, Capacitor) = 105°C
- max. absolute temp. of 125 °C →  $T_{max}$  (Capacitor) = 125°C

**EUT**

User accessible area:

- External enclosure which may be touch temp. 95°C →  $T_{max} = 95\text{ °C}$

**Power adapter**

- External enclosure which may be touch temp. 75°C →  $T_{max} = 75\text{ °C}$

4.5.5	TABLE: Ball pressure test of thermoplastic parts			N/A
	Allowed impression diameter (mm) .....	≤ 2 mm		—
Part		Test temperature (°C)	Impression diameter (mm)	
--		--	--	
Supplementary information:				

4.7	TABLE: Resistance to fire					N/A
Part		Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
--		--	--	--	--	--
Supplementary information:						



EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

<b>5.1</b>	<b>TABLE: touch current test</b>					N/A
Condition	switch "e"	switch on	switch off	reverse on	reverse off	Comment
--	--	--	--	--	--	--

<b>5.2</b>	<b>TABLE: Electric strength tests, impulse tests and voltage surge tests</b>			N/A
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional:				
--		--	--	--
Basic/supplementary:				
--		--	--	--
Reinforced:				
--		--	--	--
Supplementary information:				

<b>5.3</b>	<b>TABLE: Fault condition tests</b>					P
Ambient temperature (°C) .....		23			—	
Power source for EUT: Manufacturer, model/type, output rating .....		Refer to 1.5.1.			—	
Component No.	Fault	Supply voltage (Vdc)	Test time	Fuse #	Fuse current (A)	Observation
Vibration Motor	Locked	3V	7hrs	--	--	No hazard, damage. Temperature varied during testing on: Coil = 52.4°C, Ambient = 23.9°C.
<b>Backup pack bady</b>						
Battery pack V+ to V-	Short	3.7V	30min	--	--	Unit shutdown, no hazard, no damage.
Cell V+ to V-	Short	3.7V	7hrs	--	--	No hazard, Cell damage.
<b>Overdischarge Test</b>						
Battery pack B- to P -	Short	3.7V	7hrs	--	--	No hazard, no damage.
<b>Overcharge Test</b>						
Battery pack	--	5V	7hrs	--	--	No hazard, no damage.



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EN 60950-1

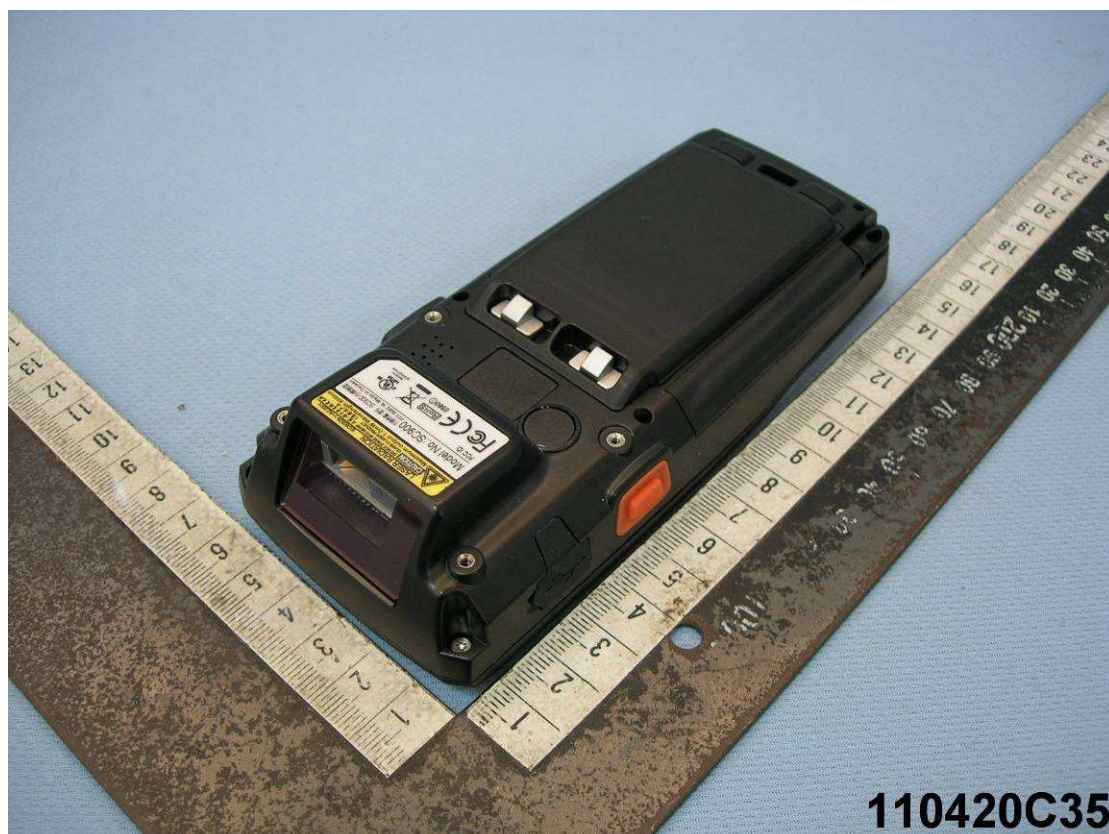
EN 60950-1							
Clause	Requirement + Test				Result - Remark		Verdict
Battery pack B- to P -	Short	5V	7hrs	--	--	No hazard, no damage.	
Main board U1105 pin 4 to 3	Short	5V	7hrs	--	--	No hazard, no damage.	
Battery pack body							
Battery pack V+ to V-	Short	3.7V	30min	--	--	Unit shutdown, no hazard, no damage.	
Cell V+ to V-	Short	3.7V	7hrs	--	--	No hazard, Cell damage.	
Overdischarge Test							
Battery pack U2 Pin 1, 2 to 5, 6	Short	3.7V	7hrs	--	--	No hazard, no damage.	
Overcharge Test							
Battery pack	--	5V	7hrs	--	--	No hazard, no damage.	
Battery pack U2 Pin 1, 2 to 5, 6	Short	5V	7hrs	--	--	No hazard, no damage.	
Main board U1101 Pin 5 to 15	Short	5V	7hrs	--	--	No hazard, no damage.	
Supplementary information:							





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Photos:  
Model SC900 & M1000



**Model SC900**



**Model M1000**





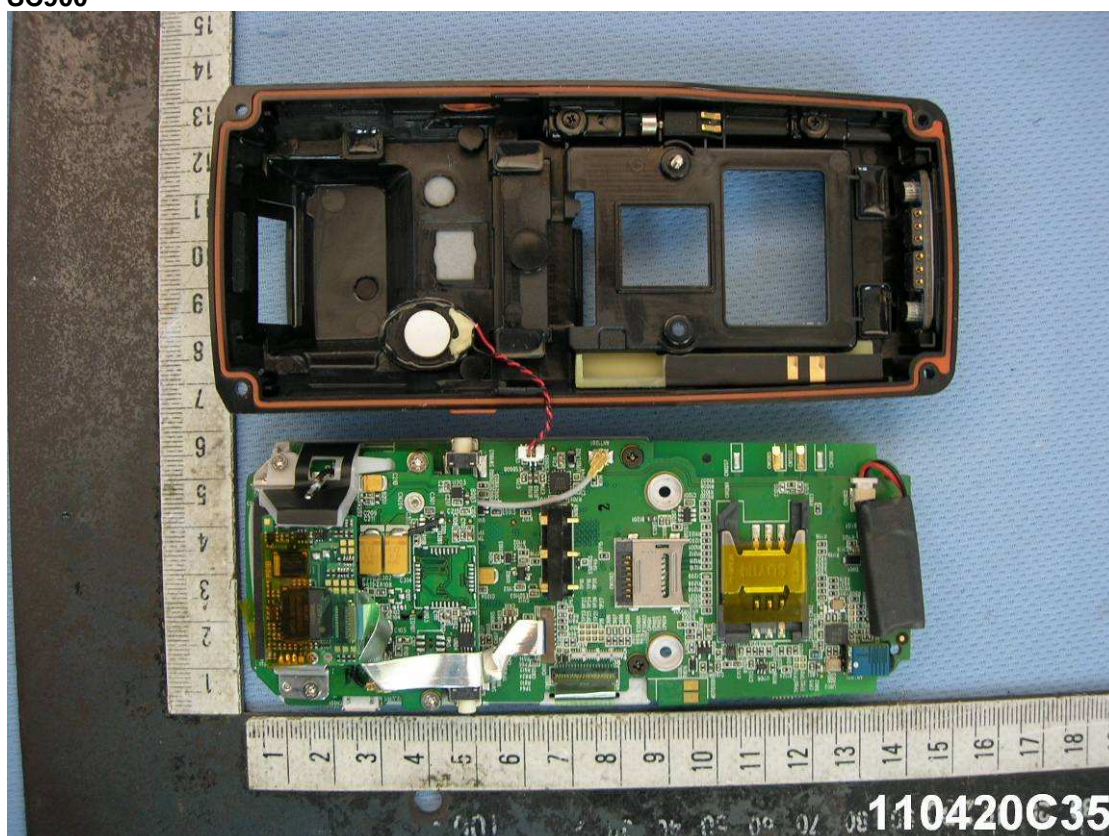
Model SC900 & M1000



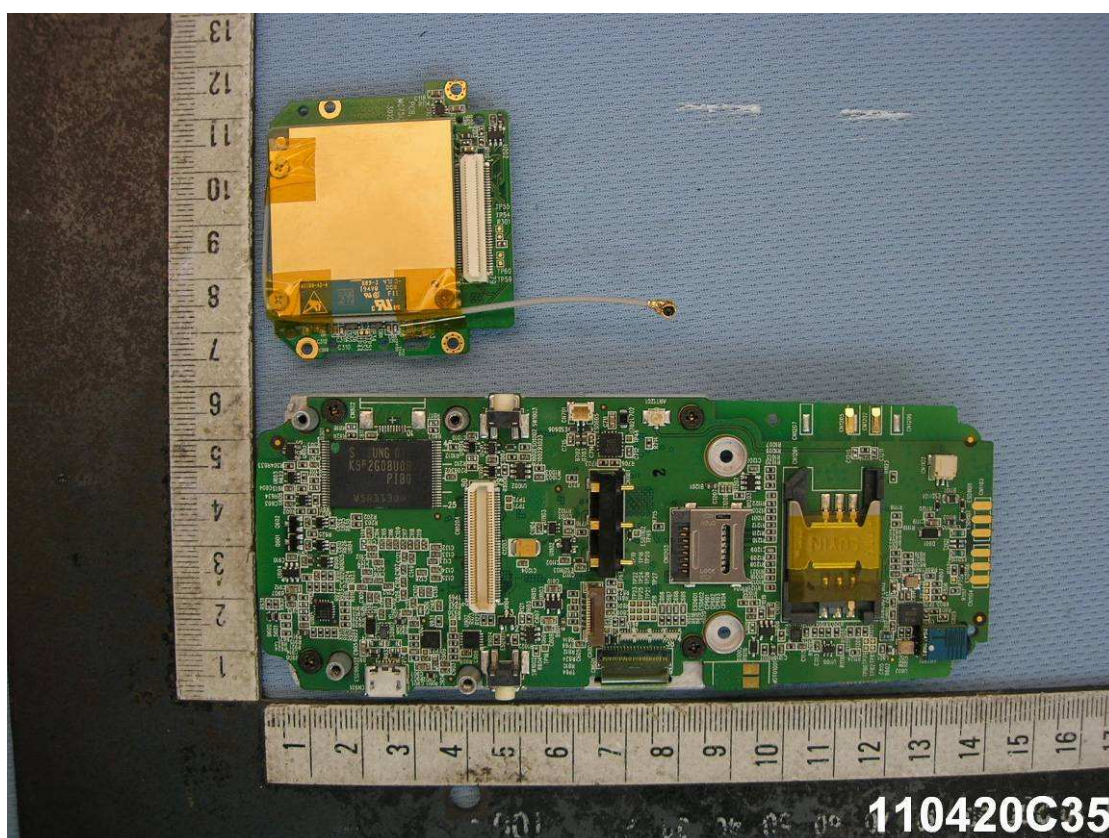
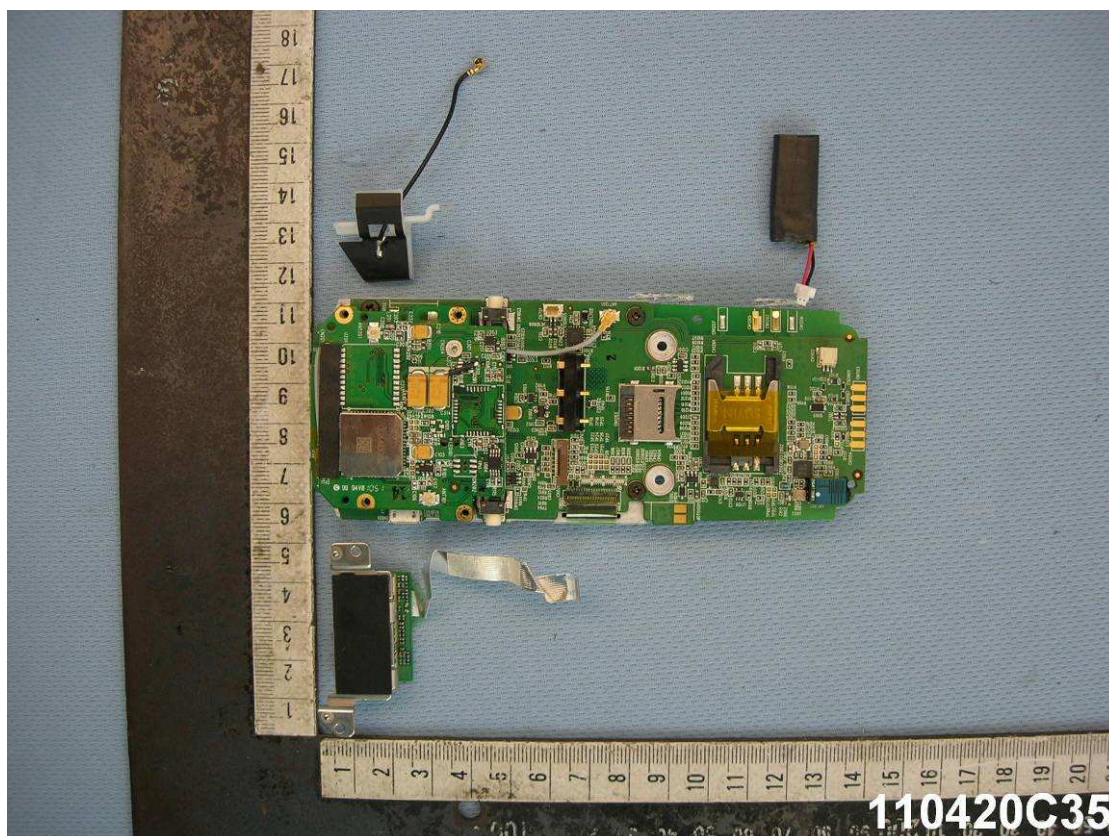




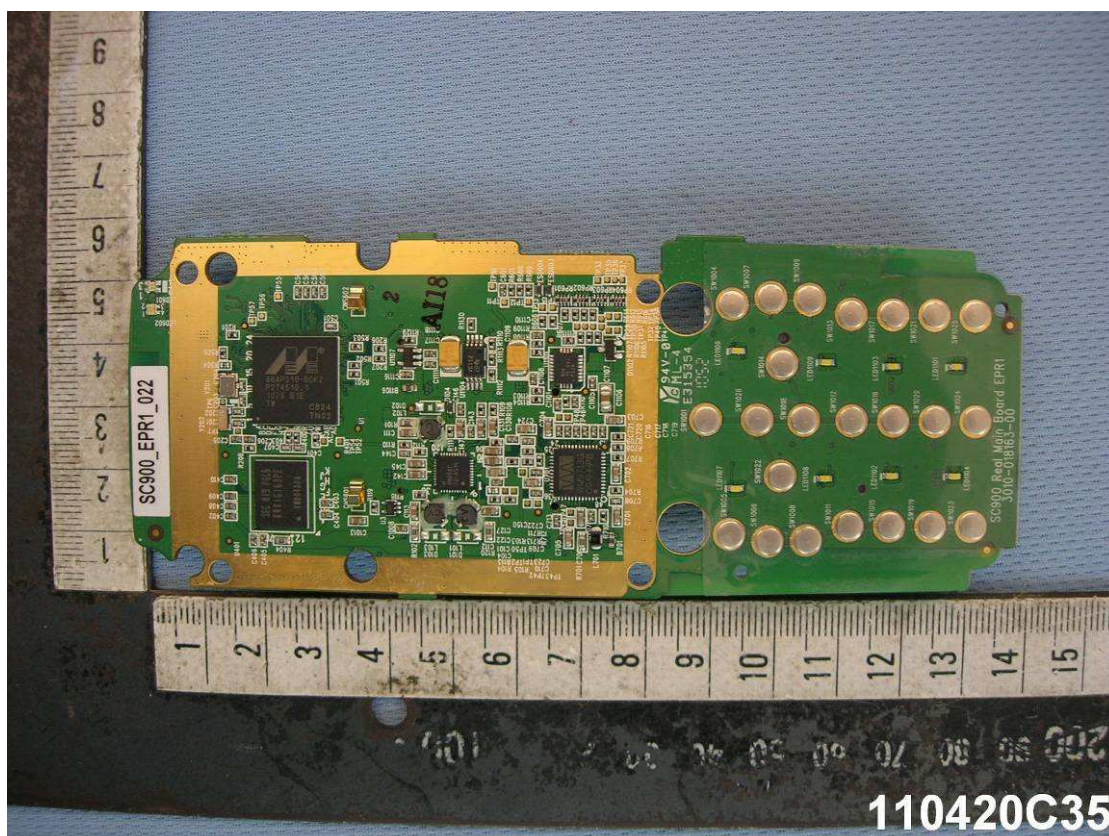
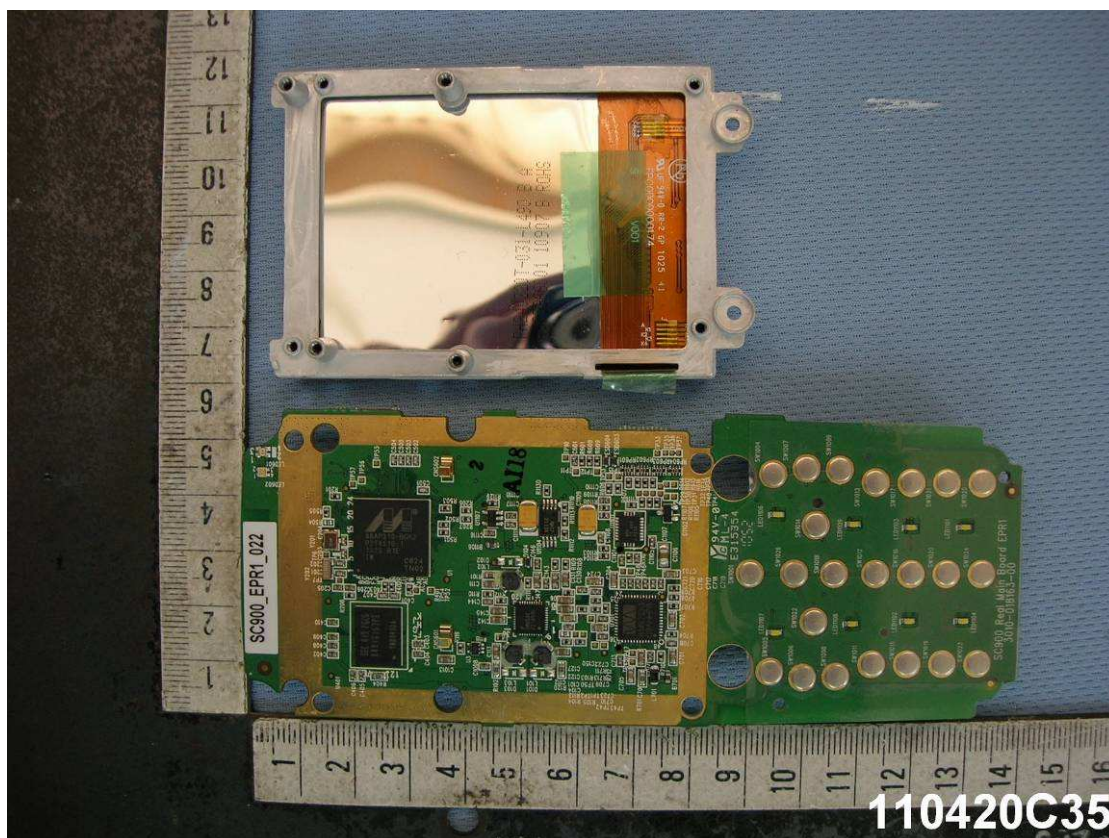
Model SC900



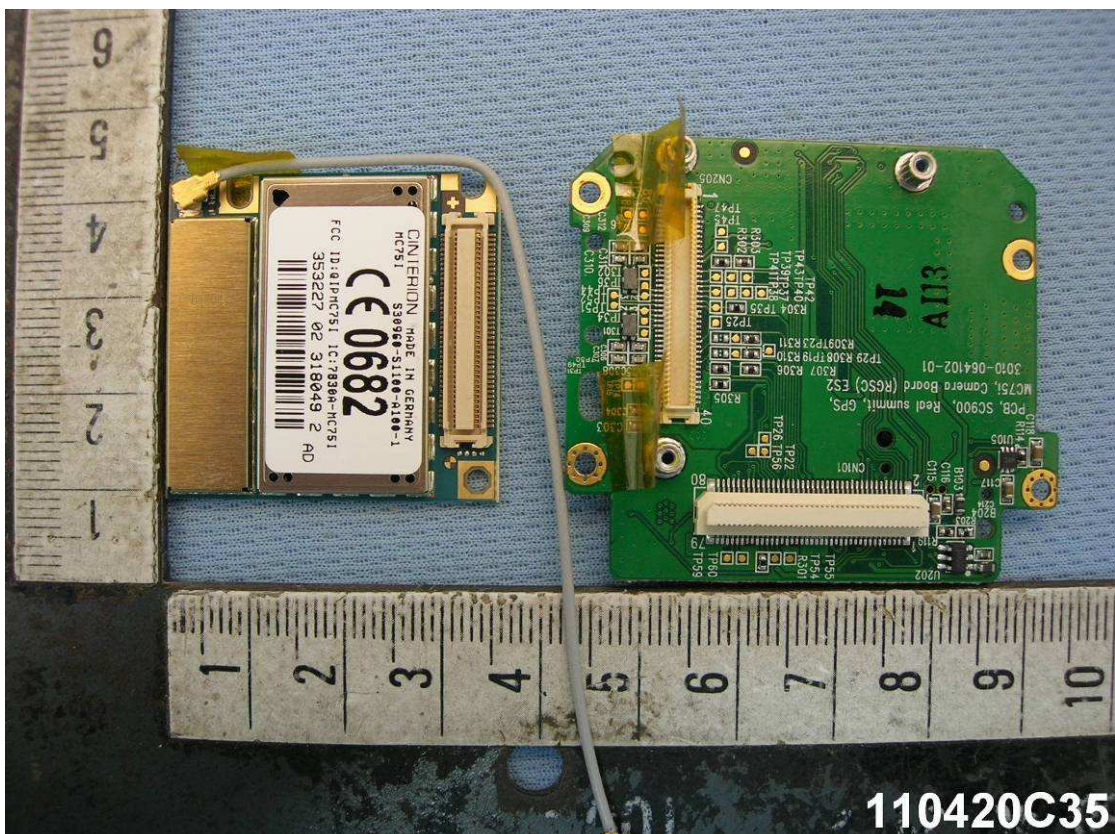
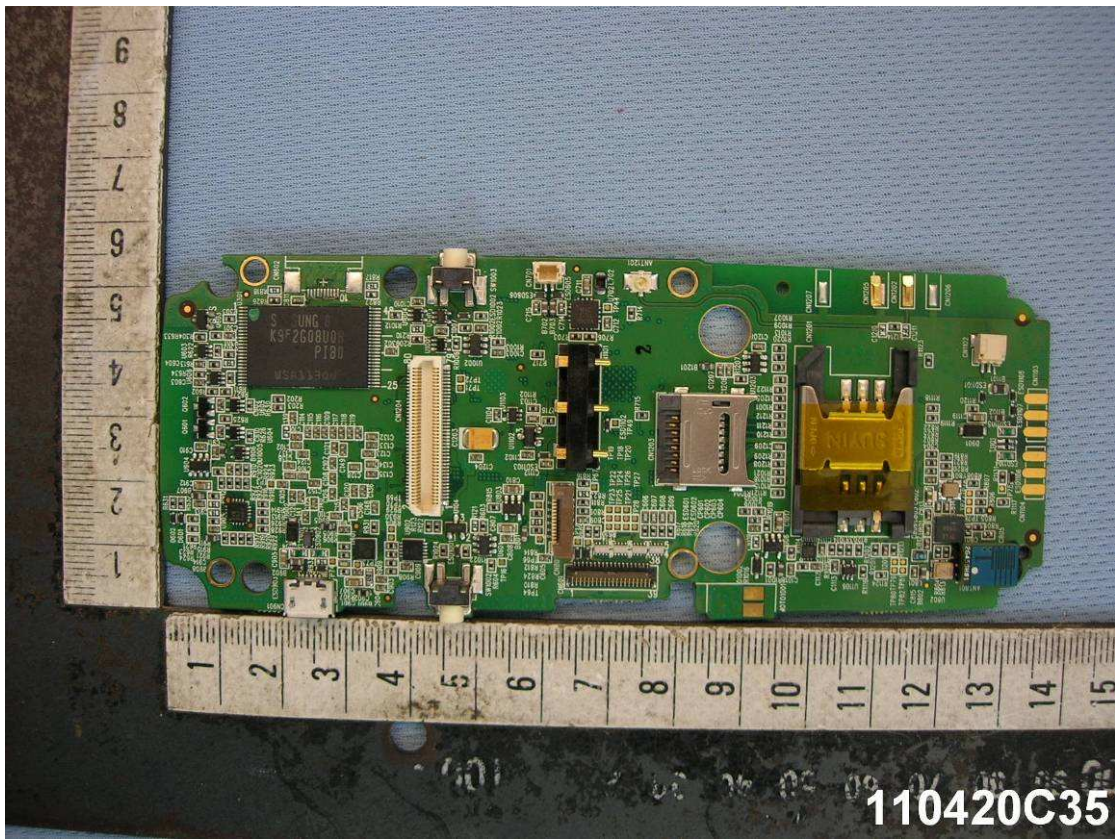










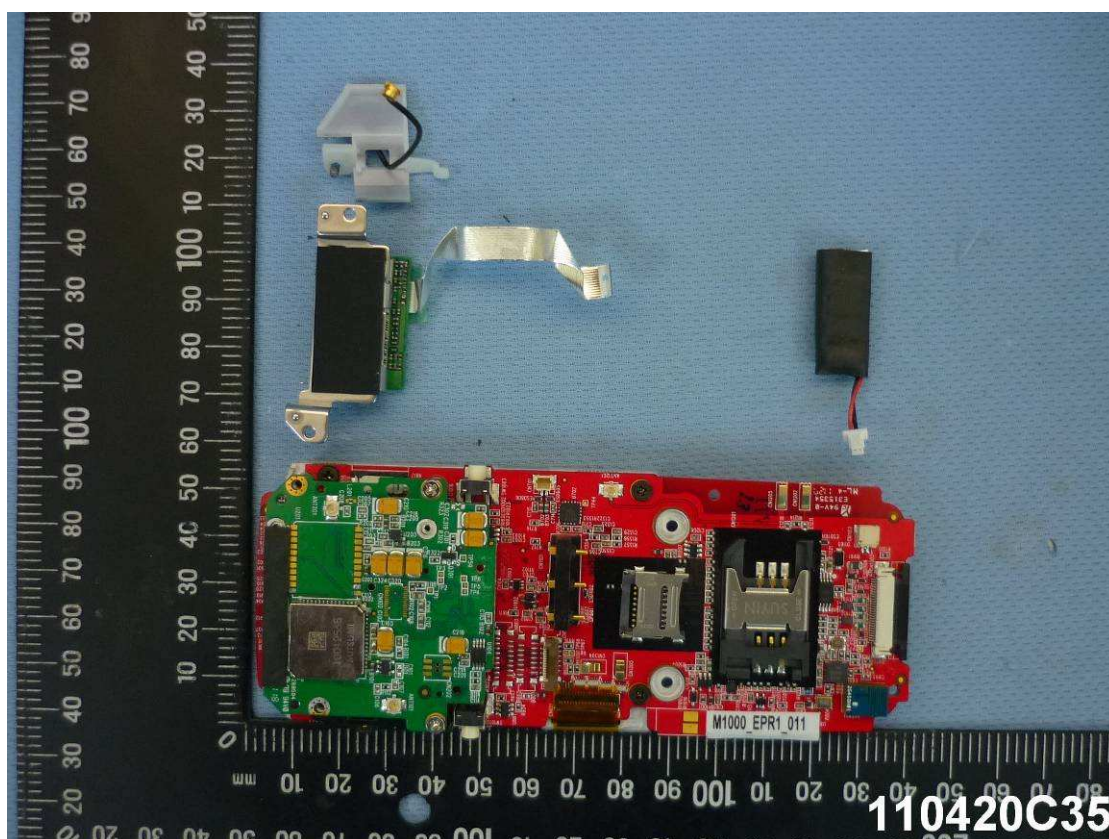
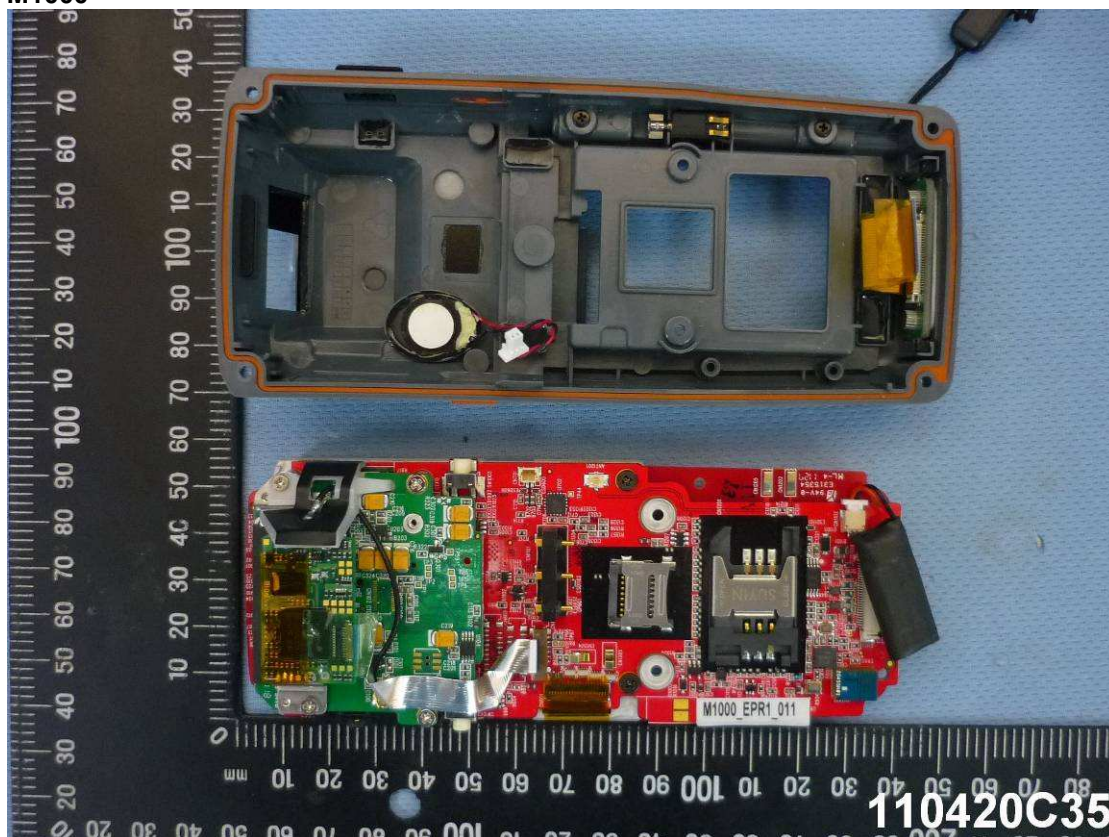




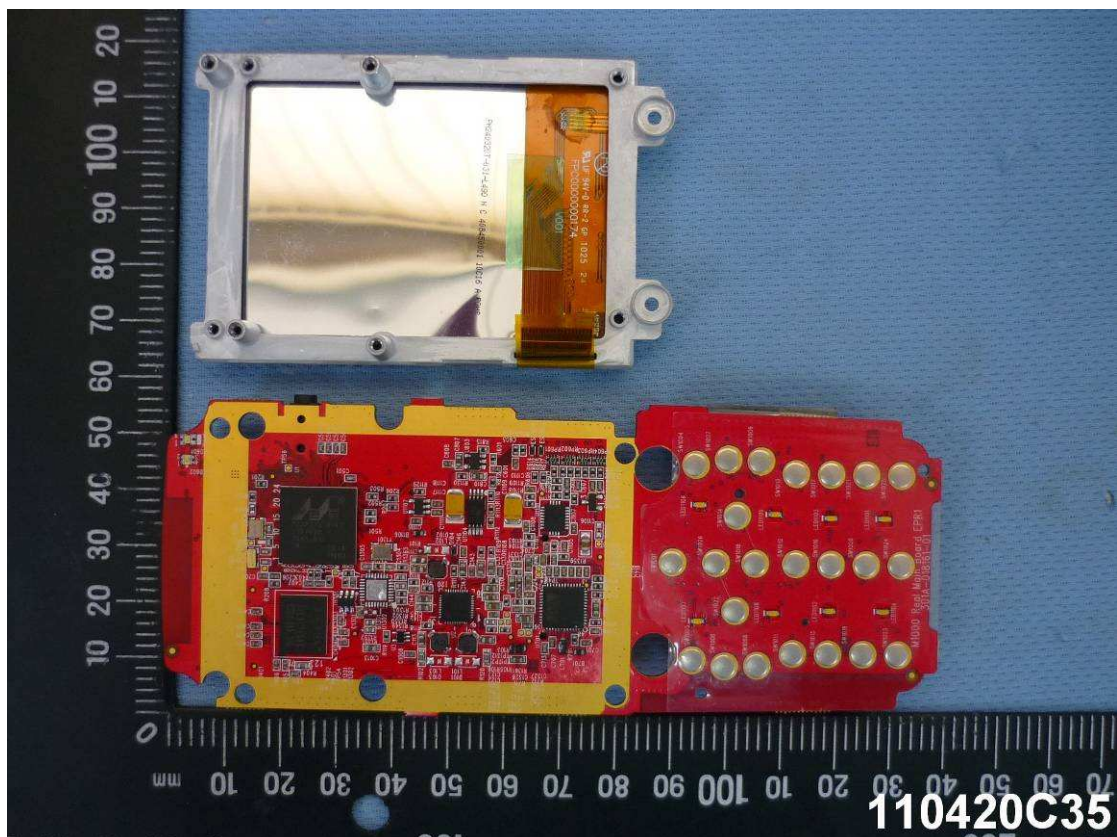
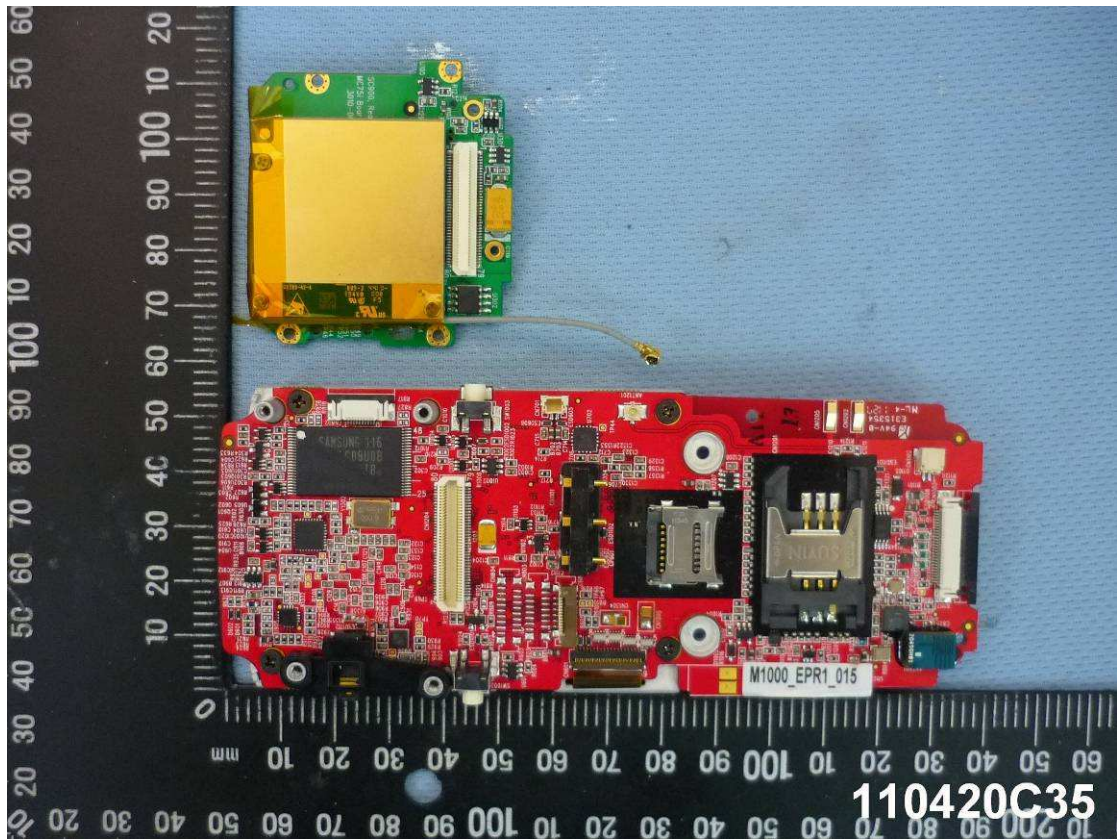




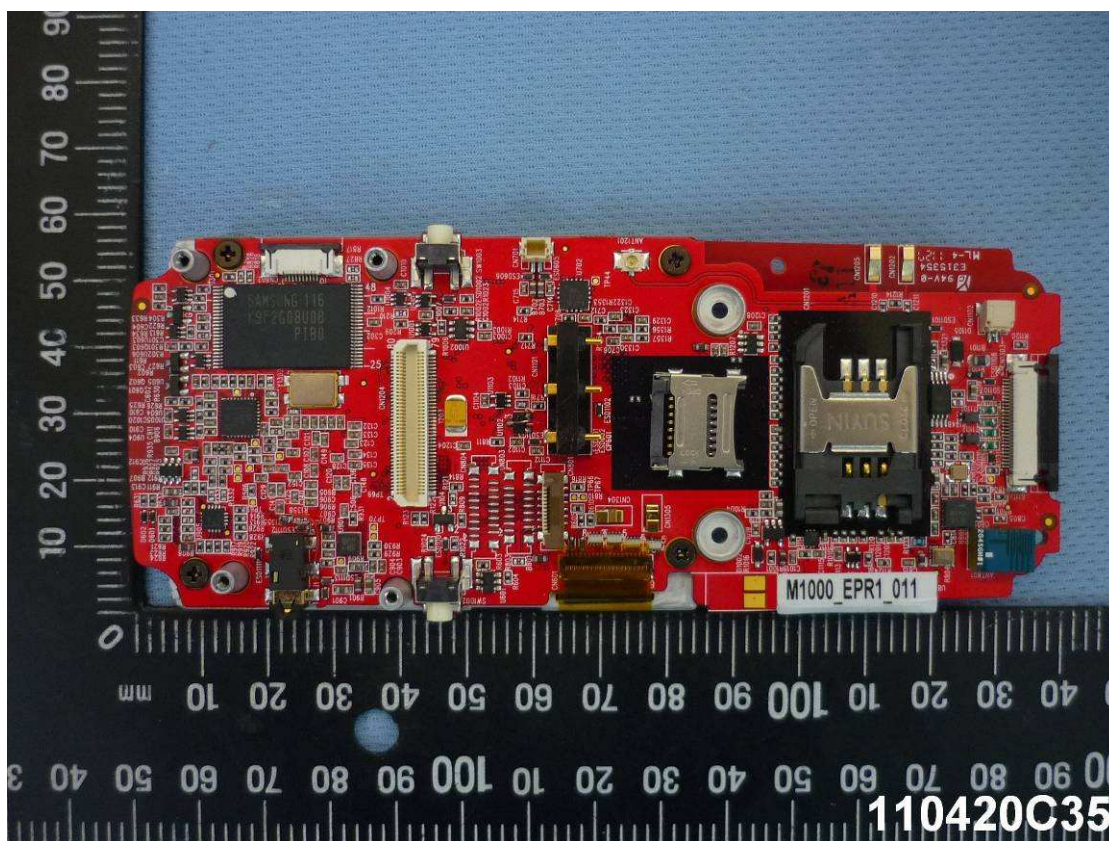
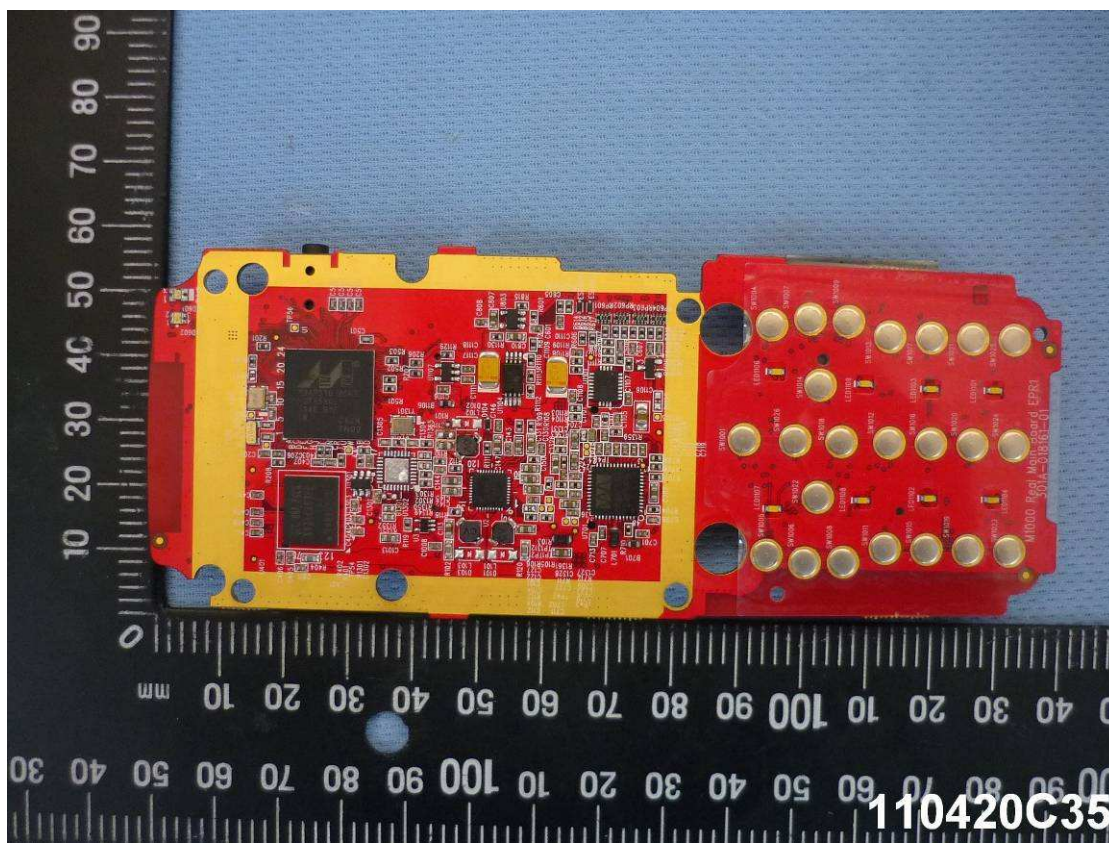
Model M1000



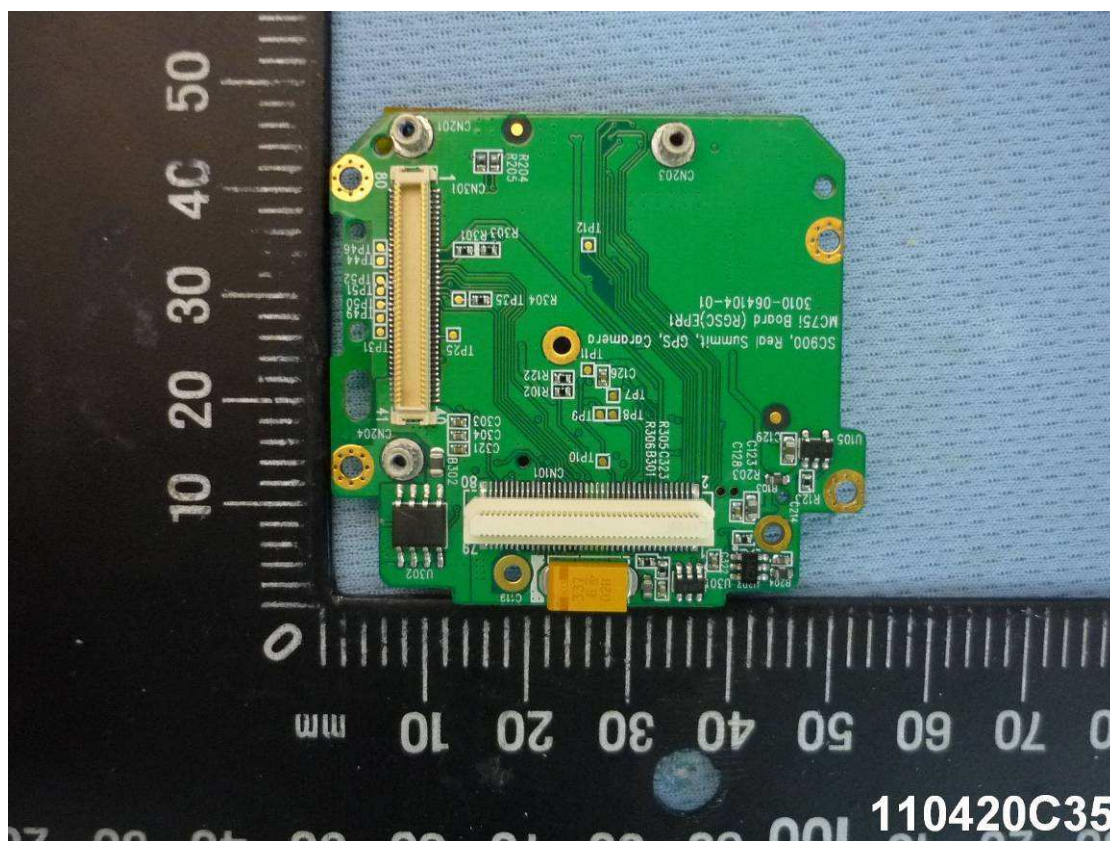




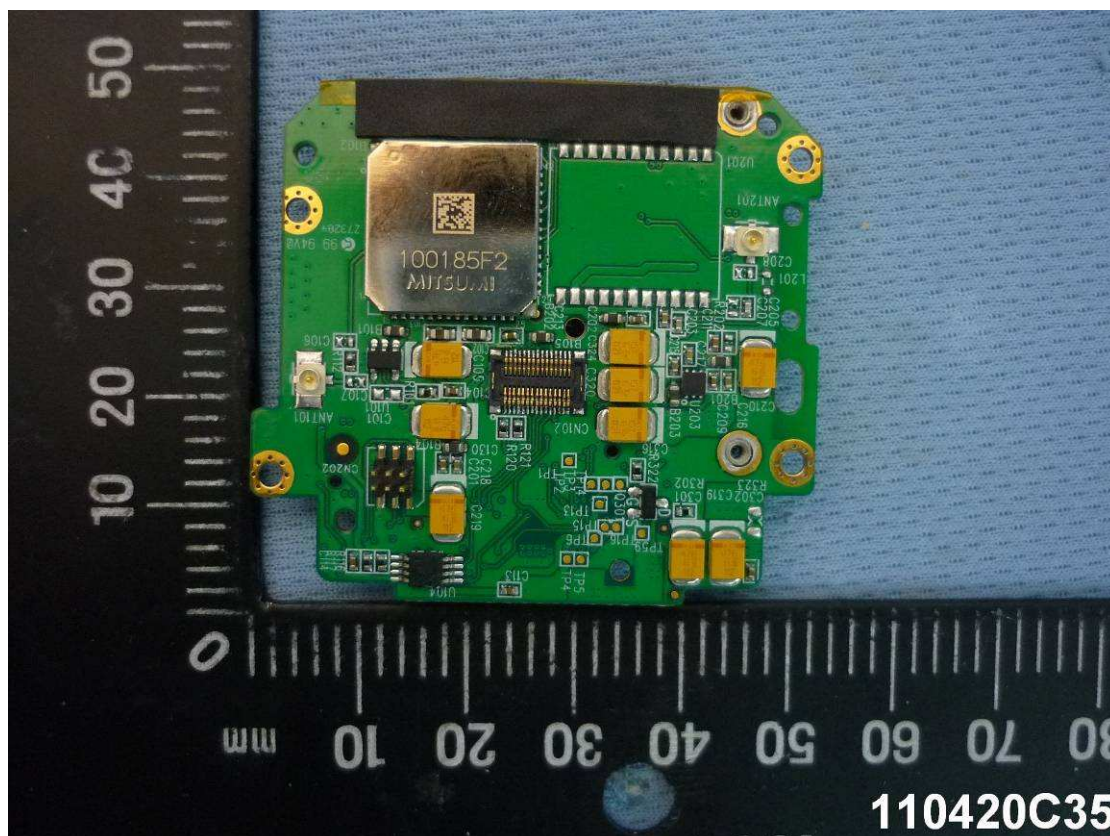








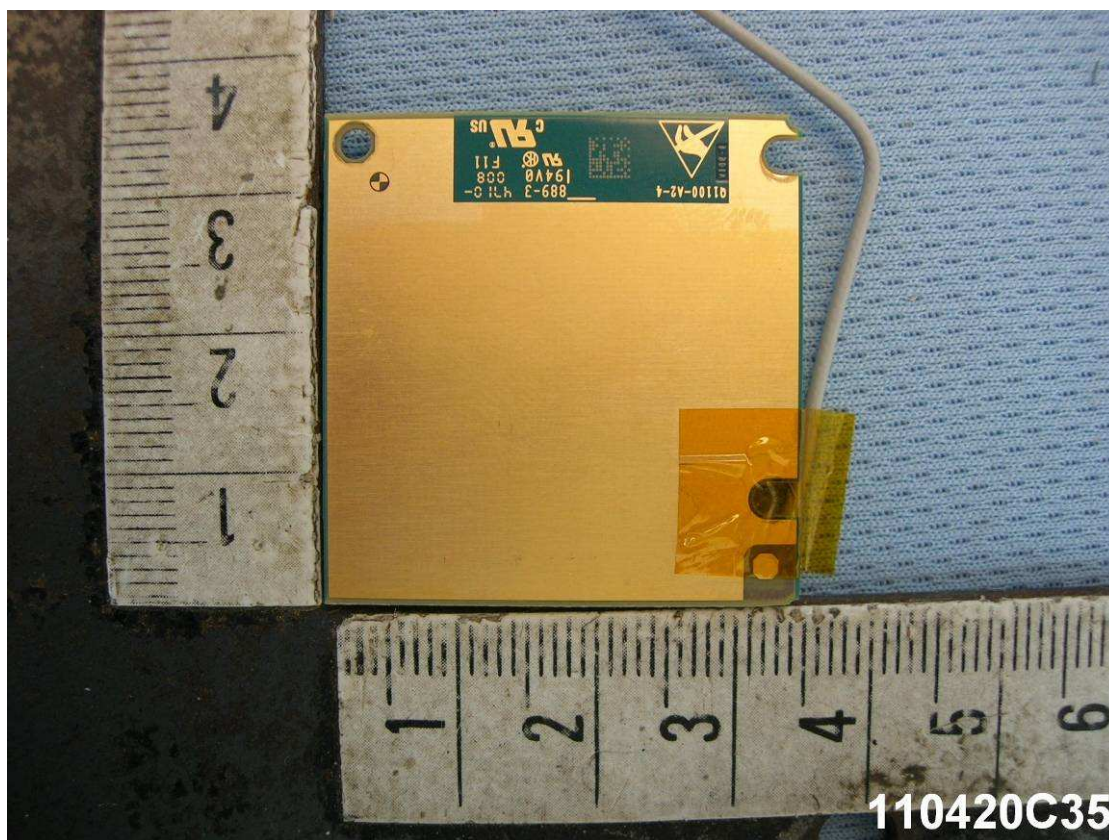




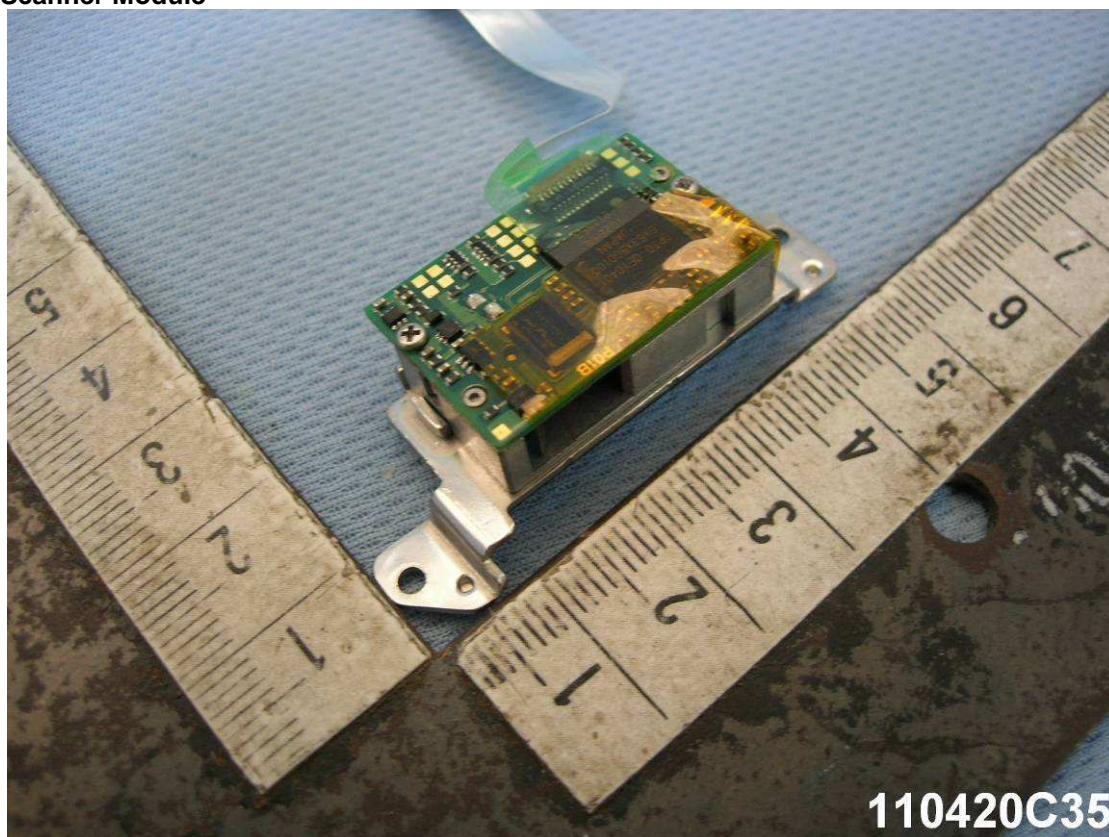
Model SC900 & M1000



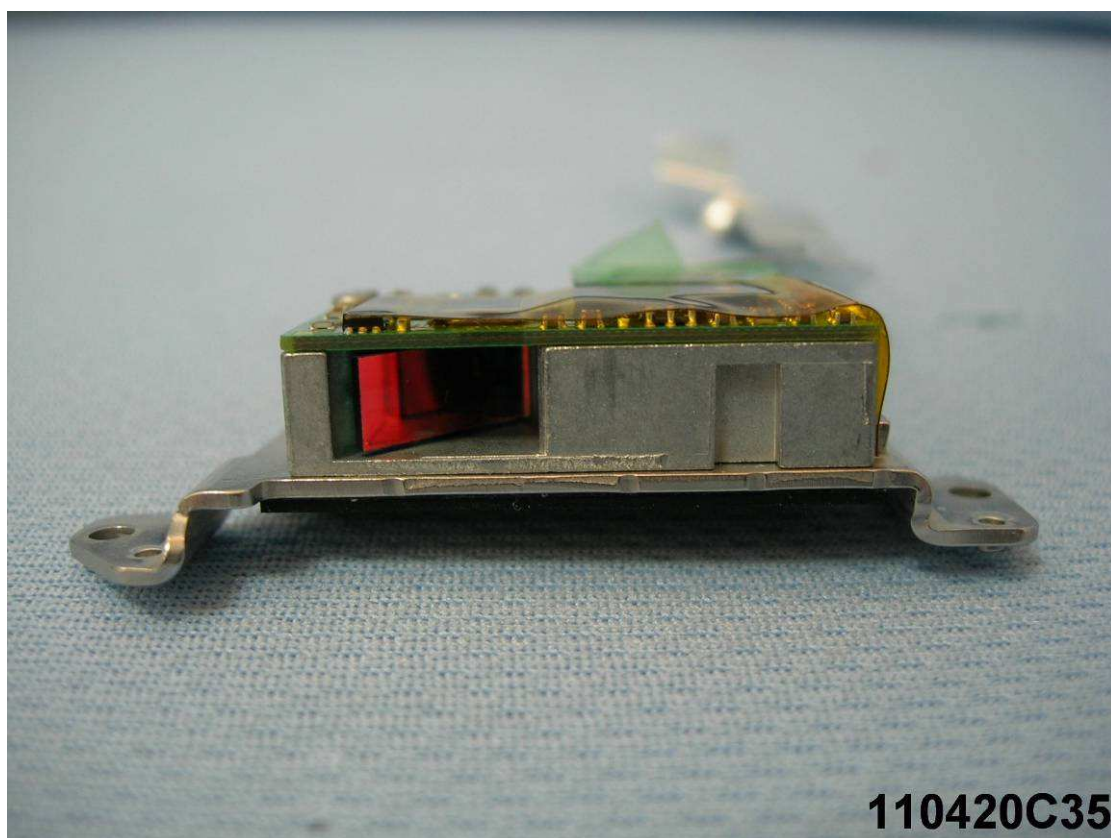
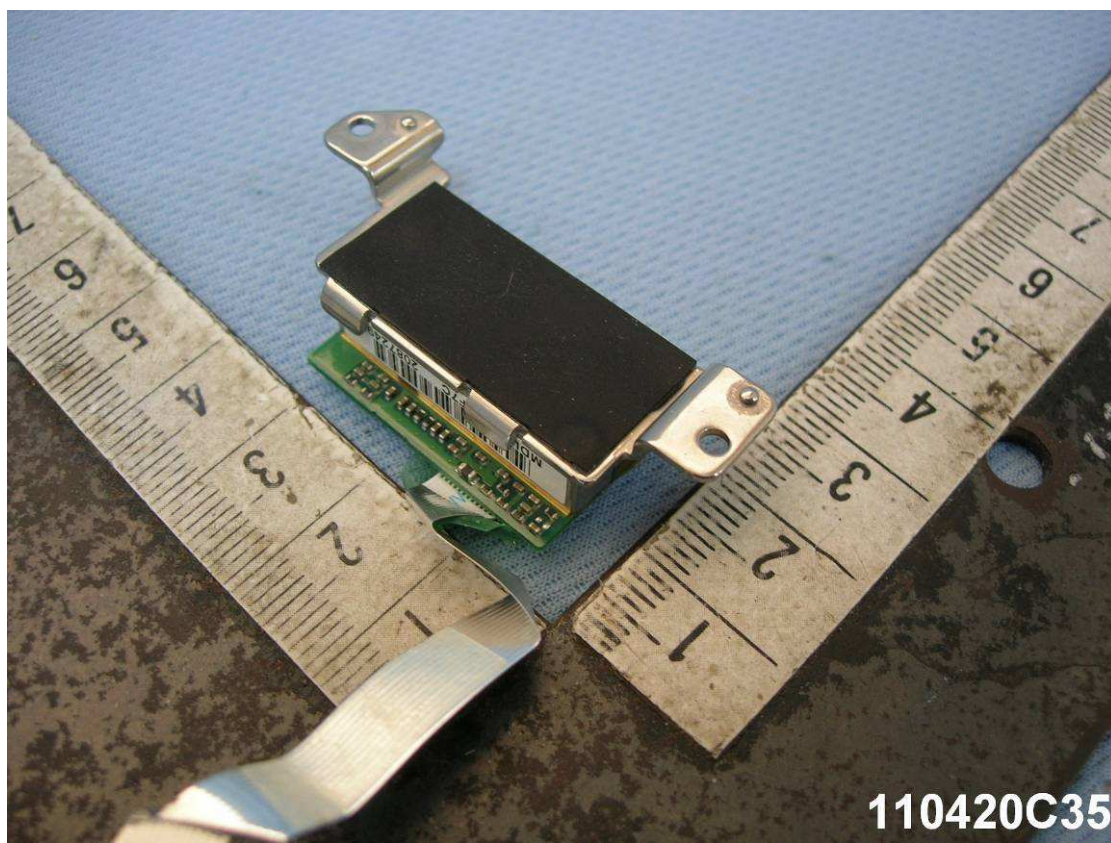




Laser Scanner Module

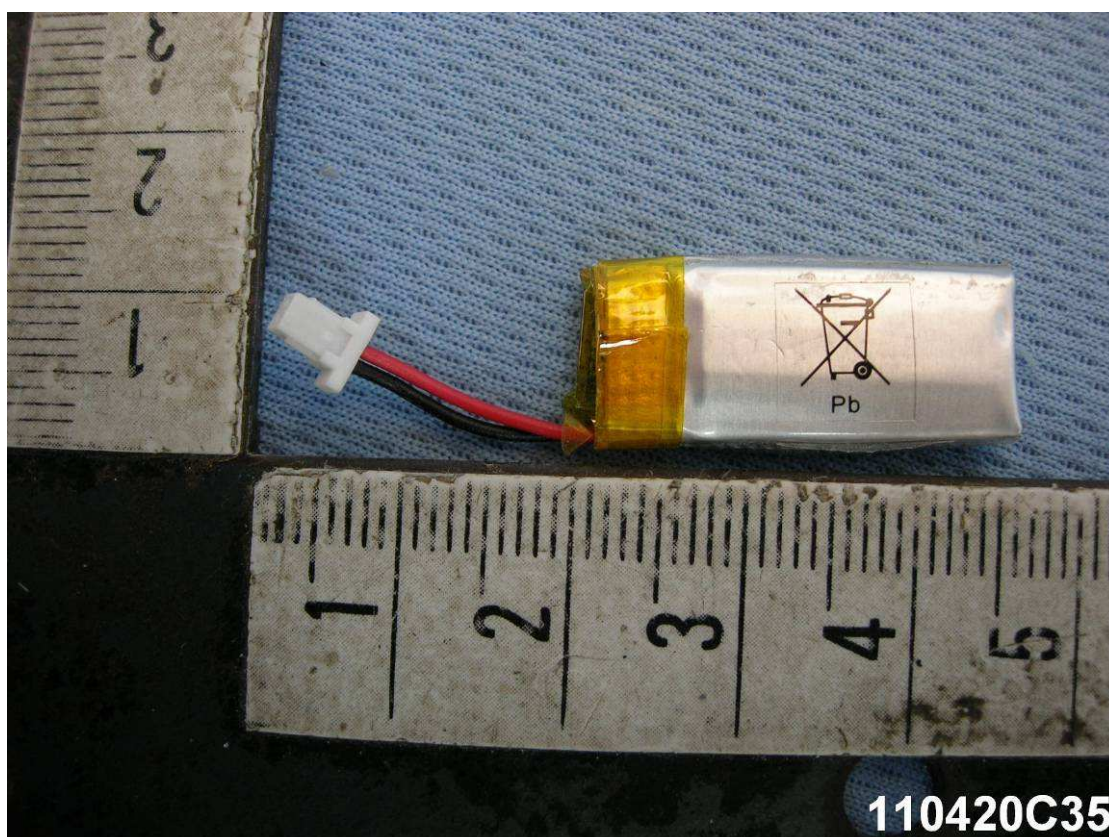
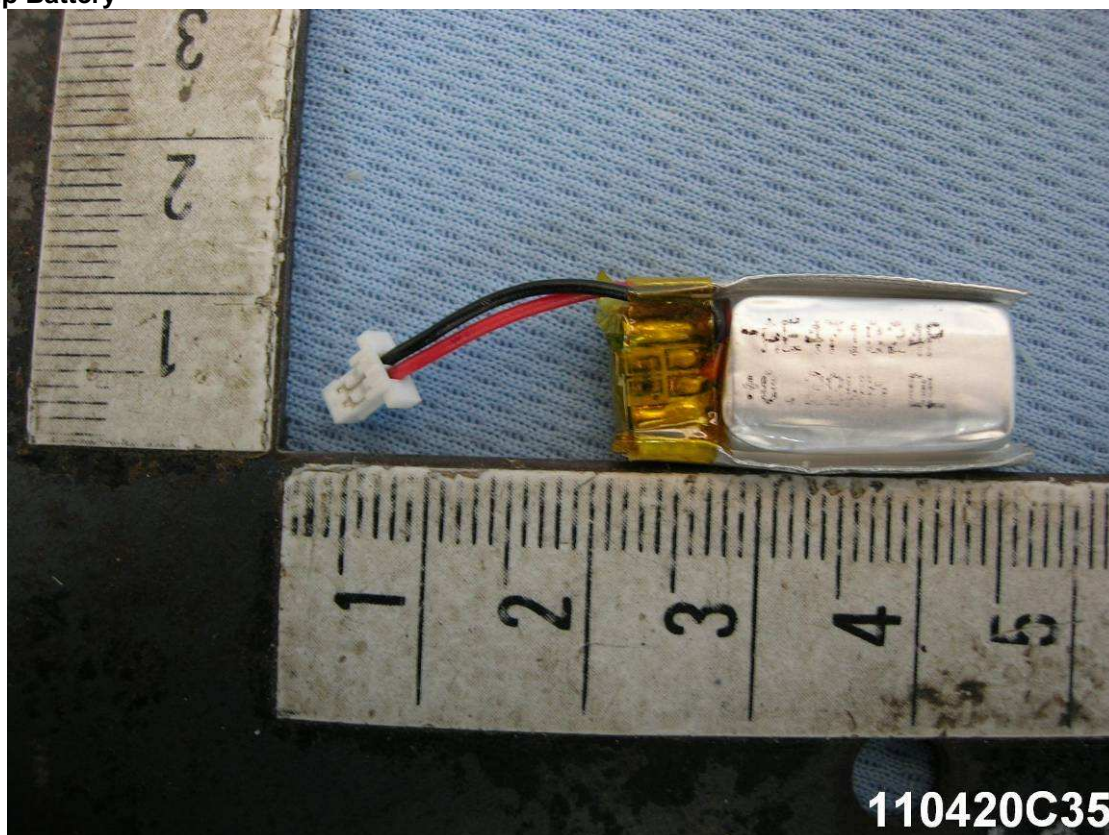




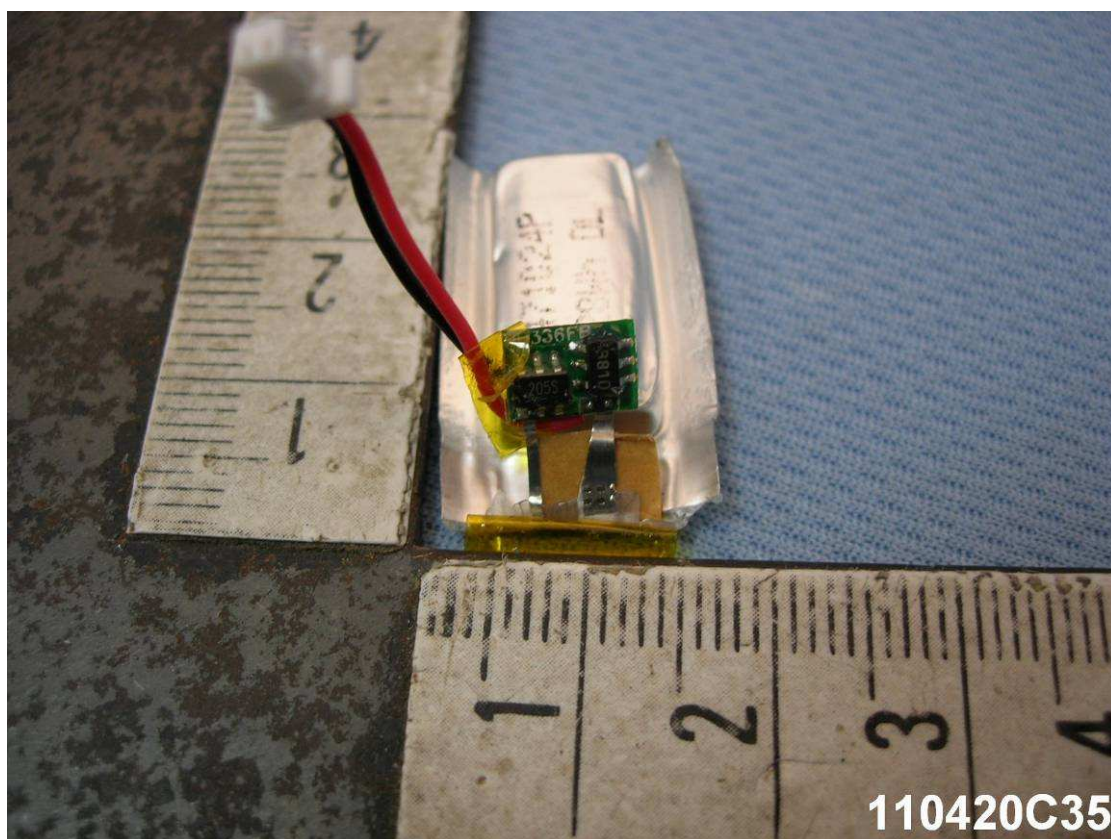
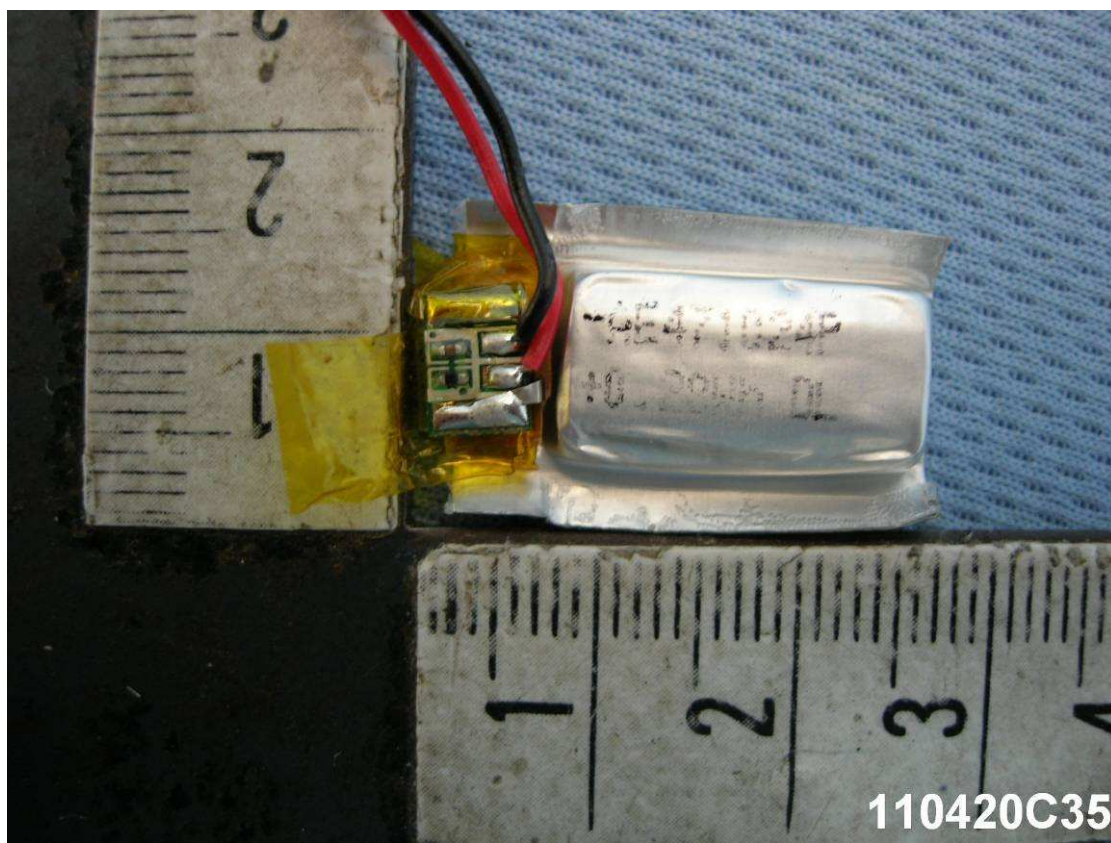




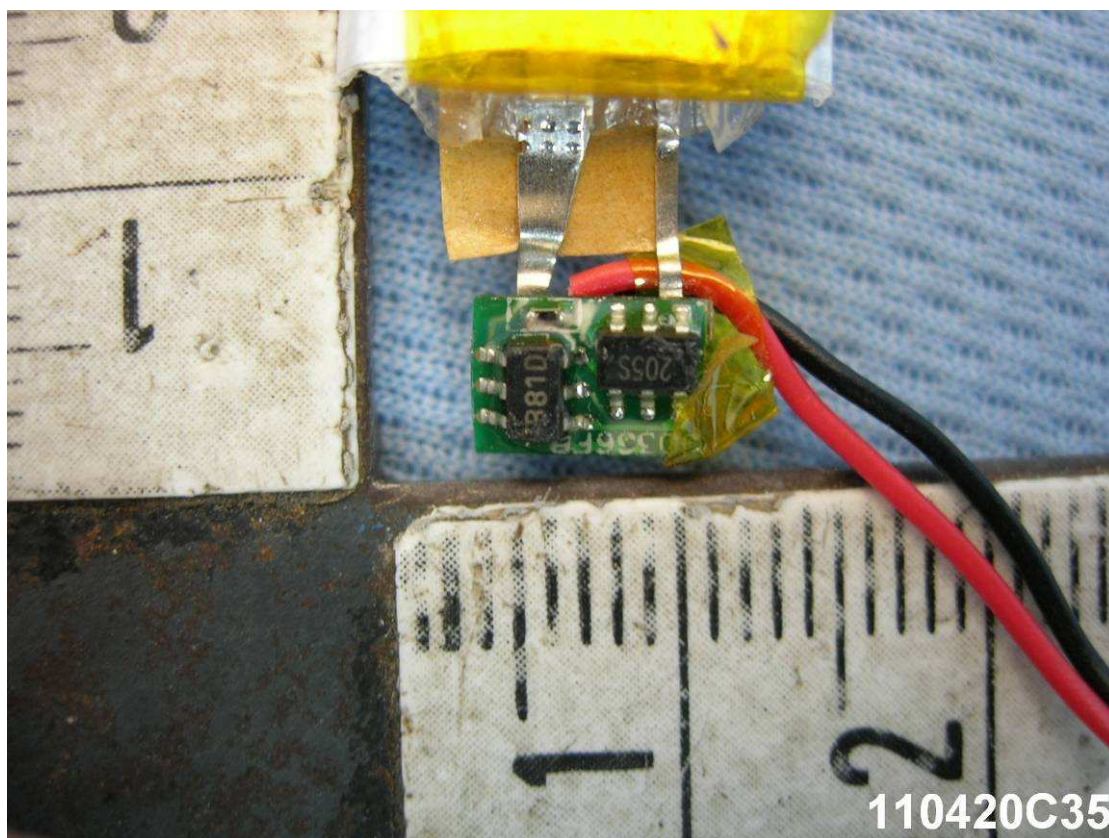
**Backup Battery**











# Battery Pack





